THE INTERNAL SECRETIONS IN RELATION TO DERMATOLOGY.

BY

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NEARLY twenty years have passed since Byrom Bramwell reported to the Newcastle meeting of the British Medical Association (1893) the results which he had obtained in cases of psoriasis, lupus vulgaris, and acute eczema by the internal administration of thyroid extract.[1] This was the beginning of organotherapy in connexion with dermatology. Thyroid treatment had already been successfully used in myxoedema by G. R. Murray, Hector Mackenzie, Arthur T. Davies, and others; and it was now employed on an extensive scale in the therapeutics of skin affections. But, as was perhaps inevitable, it was administered with too little discrimination, and, though it found enthusiastic advocates, signs of reaction were not long in declaring themselves, and after a while it was neglected and almost forgotten. Of late years, owing in part to the light that has been thrown upon the physiology and pathology of the ductless glands by a multitude of investigators, there has been a revival of interest in the subject, and the more discriminating use of animal extracts in many chronic skin diseases has yielded results more favourable than those at first obtained. The time seems, therefore, to be appropriate for considering in some detail the influence of the internal secretions upon the skin and its appendages, and attempting an estimate of the value of organotherapy in the treatment of cutaneous affections.

HISTORICAL NOTES.

It may not be without interest first to note the chief landmarks in our knowledge, so laboriously acquired, of the internal secretions, one of the most obscure and complex, and at the same time one of the most fascinating branches of medical science. In his textbook of physiology, published in 1776, Haller[2] grouped together the thyroid, the thymus, and the spleen as glands which, though ductless, secrete fluids that find their way into the general circulation. Thenceforward the glandular character of the thyroid body was generally accepted, though it was not until many years later that any serious attempt was made to investigate the nature and function of its secretion. In 1844 Johannes Müller[3] included among secretory as distinguished from excretory glands, the spleen, thyroid, suprarenals, thymus, and placenta. But it was in connexion with a gland that is not ductless that the action of an internal secretion was first experimentally proved. In 1849 A. A. Berthold, of Göttingen,[4] published his famous experiments in the transplantation of the testicles of cocks, showing that after the transplantation the animals retained their male characters in voice, reproductive instinct, fighting spirit, and growth of combs and wattles. Thus he demonstrated the influence exerted through the blood upon the economy by an organ through which the blood stream circulates, and to him, as Biedl[5] remarks, belongs the honour of having first proved the existence of an internal secretion and seized its immediate significance.

The demonstration, however, passed unheeded; the time was not yet ripe for a recognition of its far-reaching import. In the following decade came the classical investigations by which Claude Bernard[6] proved that in addition to its external secretion—bile—the liver forms an internal secretion—glycogen—which, he held, passes into the blood stream as sugar. But it was reserved for Brown-Séquard[7] to formulate (1869) the theory that all glands, whether furnished or unfurnished with ducts, contribute to the blood substances of physiological utility. Some years earlier,[8] prompted by Addison's discovery of the connexion between the suprarenals and the disease which now bears that great physician's name, he had experimentally investigated the action of those bodies, and had come to the conclusion that in certain animals their extirpation caused rapid death, which could be postponed by the injection of suprarenal extract. Finally, in 1889,[9] he related the experiments which he had been conducting for twenty years with the subcutaneous injection of testicular extract, and thus, whatever view may be taken of the value of that series of experiments, became the founder of modern organo- or opo-therapy, so like, yet so unlike, the organotherapy of primitive medicine.

The importance of the thyroid was first revealed by the results of the operations undertaken by the Reverdins and by Kocher for the relief of goitre. The keen observation of Sir William Gull[10] had already detected the resemblance to cretinism of the condition afterwards known as myxoedema, and he had characterized it (1874) as "a cretinoid state supervening in adult life in women"; and when (1883) the Reverdins and Kocher described the symptoms produced in goitrous patients by removal of the thyroid their identity with the symptoms described by Gull was recognized by Sir Felix Semon,[11] and the Reverdins styled the condition they had unwittingly created "*myxoedème postopératoire*." Next, it was found *post mortem* that myxoedema is associated with degeneration of the thyroid. The brilliant experimental work of Schiff, Sir Victor Horsley, G. R. Murray,[12] and many other observers that followed these discoveries has not, it must be admitted, finally solved the problems to which it was directed, partly because the gland functions differently in different animals, but also because at first the influence of the parathyroids was not recognized. These bodies were only discovered in 1880 by Sandström, and it was not until 1892 that their importance was insisted upon by Gley,[13] whose view, elaborated by Vassale and Generali, is that their secretion is even more essential than that of the thyroid itself.

To the pituitary body, which has functional relations with the thyroid, a glandular character had from time immemorial been ascribed. It was the view of Galen, and long afterwards of Vesalius, that it secreted a mucous fluid, which escaped through the nose, while Magendie, in times nearer our own, held that its office was to collect the cerebral lymph and pour it into the circulation; but it was so recently as 1889 that Pierre Marie,[14] by associating it with acromegaly, suggested the real nature of its function as influencing the development of the body and furnishing the explanation of gigantism, infantilism, and other abnormalities of growth.

Of the thyroid and its functions our knowledge is still defective. The most diverse views are taken of its relations with the parathyroids, and all that can be regarded as certain on this point is that the relationship is of the most intimate character. This inference would appear to be irresistible from the hypertrophy which the parathyroids undergo when the thyroid is extirpated, and the thyroid when the parathyroids are excised.

To these historical notes it may be added that it was Starling[15] who proposed the term "hormones" (from ὁρμάω = I excite or arouse) for the chemical stimuli, or, to use his own expression, "chemical messengers," which are "carried from the organ where they are produced to the organ which they affect by means of the blood stream." The word met with general acceptance and is frequently used as a synonym for "internal secretions."

CUTANEOUS SYMPTOMS OF MYXOEDEMA.

How the thyroid and the other ductless glands influence each other and the body generally—whether the secretions elaborated from the blood and then, directly or indirectly, returned to it, stimulate metabolism and growth, or neutralize the toxins of metabolism, or exercise an inhibitory effect upon organs whose activity requires to be controlled, or whether there is a combination of these processes, is a question still involved in obscurity. Nor is the difficulty of determining the functions of the thyroid lessened by the interaction that takes place between this gland and others. But however the thyroid does its work, and whatever its relations with other glands, it is certain that degeneration of this organ is causally connected with the changes in the integuments which enter into the myxoedema syndrome. It is probable also, though the evidence is less conclusive, resting as it does upon purely clinical grounds, that in irregular functioning of the thyroid is to be found in many cases, though not necessarily in all, the explanation of cutaneous changes similar to those met with in myxoedema. In this disease the skin is cold, dry, and rough, seldom or never perspires, and may take on a yellowish tint; it presents swellings, and the mucous membranes

also may be swollen. There is a bright-red flush in the malar region, due to dilatation of capillaries and veins. Swale Vincent[16] has found that the elements of the connective tissue of the derma are torn asunder, while the fibres are the seat of a hyperplastic process, and the cell nuclei and the fibrils of the gelatinous substance between the fat lobules are multiplied. The skin as a whole looks transparent, as though saturated with a semi-fluid substance. The hair of the scalp becomes scanty, the pubic and axillary hair, with the eyelashes and eyebrows, often falls out; in many cases the teeth are brittle and carious. As these signs disappear under the administration of thyroid preparations, there is prima facie ground for expecting benefit from the same treatment in conditions presenting more or less resemblance to them, but not associated with myxoedema, such as psoriasis, alopecia, ichthyosis, and xerodermia. That expectation has been abundantly justified by experience. So often, indeed, have I during the last two years found the use of thyroid extract followed by improvement in these and other conditions that I now make it a routine practice, in examining patients suffering from chronic skin affections of which the causation is not known, to palpate the thyroid. If the gland be smaller than usual a trial of thyroid extract is suggested; if there be marked hypertrophy, thyroid medication is contraindicated. It has, however, to be remembered that thyroid insufficiency may be due not to atrophy of the gland but to replacement of the vesicular substance by interstitial growth. Moreover, it is probable that thyroid hypertrophy is sometimes compensatory rather than morbid, the result of an effort to restore secretory equilibrium that has been disturbed by failure of some other ductless gland. Cases are recorded in which thyroid treatment has abolished cutaneous symptoms associated with thyroid excess; such cases are examples of what French authors designate *l'instabilitié thyroïdienne*. It is necessary, therefore, to be on one's guard against hastily concluding that a moderate degree of thyroid hyperplasia is an indication against the use of thyroid extract.

Itching Affections.

In no skin affection has thyroid medication given better results than in *psoriasis*. The failures that have been reported by myself and others are explained by the fact that formerly there were no data for determining the cases to which the remedy was appropriate. My recent experience has led me to the conclusion that one of the secrets of success in the employment of thyroid extract, as of other ductless gland preparations, consists in selecting for its administration cases in which the skin affection complicates other conditions in which this remedy is indicated. In obesity, in infantile wasting, in a certain type of chronic rheumatism, both articular and muscular, in osteomalacia, rickets, and delayed union of fractured bones, in haemophilia, etc., thyroid preparations are of proved utility, and whenever cutaneous affections are found associated with such conditions as these, there is a presumption in favour of thyroid treatment. The association may, of course, be fortuitous, but on the whole it is more likely that the morbid process in the skin is an expression of the constitutional condition. Thus I have found thyroid extract specially efficacious in psoriasis associated with adiposity. In the case of a woman aged 32, who also displayed the mental symptoms of myxoedema, under a course of thyroid extract and arsenic the psoriasis entirely disappeared, the adiposity diminished, and the mental symptoms and general health were greatly benefited. Arsenic alone had been employed without avail; there can be no doubt, therefore, that the improvement was due, mainly at any rate, to the thyroid extract. This is but one of a series of somewhat similar personal cases in which the treatment has proved to be successful. Léopold-Lévi and de Rothschild[17] report cases of psoriasis associated with chronic rheumatism in which the psoriasis completely disappeared under thyroid treatment. In psoriasis generally my experience is that the treatment is more suitable for chronic than for acute cases; and I agree with Radcliffe Crocker and with C. E. Sajous[18] that thyroid extract should not be exhibited until the eruption is fully developed. Stelwagon,[19] while holding that it has but a limited sphere of usefulness in psoriasis, allows that it has been of service in a few instances in which other agents had failed, and he regards it therefore as a reserve remedy for trial in rebellious cases. In one such case in which it was employed with little hope of success, Sir Clifford Allbutt was agreeably surprised to find that it produced rapid and complete cure. The effect produced consists not only in lessening or abolishing the irritation, but also, it would seem, in stimulating the epidermal layers, so that the degenerate epidermis scales off and is replaced by healthy epidermis.

This is not the only itching affection in which thyroid treatment has been used with success. Obstinate cases of *pruritus* have proved amenable to its influence. In *eczema* I am able to report most encouraging results. Unlike psoriasis, this affection responds to it not only in chronic but also in acute forms. The most responsive cases are those in fat subjects, and those, again, in which the eczema is associated with xerodermia. In cases belonging to both these groups I have found it to answer exceptionally well. Léopold-Lévi and de Rothschild record three cases of eczema associated with thyroid symptoms which were cured or ameliorated by thyroid treatment; they also refer to a case reported by Parhon and Papinian in which eczema complicating chronic rheumatism disappeared under the same treatment. Marbé[20] reports two cases of eczema cured by thyroid. Eason[21] has successfully treated cases of eczema in young children with thyroid, and I have employed it with advantage in such cases. In several cases of infantile eczema, especially in fat babies, I have had equally satisfactory results. Moussous[22] has found the treatment answer well in seborrhoeic eczema of the scalp.

Dystrophies of the Skin.

Ichthyosis, a malformation of the epidermis, was one of the affections in which thyroid extract was used with advantage in the early days of cutaneous organotherapy by Byrom Bramwell and by Arthur T. Davies.[23] Darier[24] counsels its prudent use in such cases. Stelwagon can only say that it deserves a trial. My own recent experience has been distinctly more favourable. I have used this agent in a number of cases, and in none without benefit. One in particular may be cited because of its inveteracy. The patient was a lady of 25, who had long-standing xerodermia of the palms, elbows, and knees, with severe seborrhoea of the scalp, scanty hair, and dry skin, the general picture resembling that of myxoedema. Under a combined course of thyroid extract and arsenic all the symptoms, notably the seborrhoea of the scalp and the dryness of the skin, were much abated, and the general health strikingly improved. Favourable results are also reported by Weill, Mouriquand, and Barth.

In *Darier's disease* there is ground for believing that thyroid is indicated, since it is associated with cellular degeneration, and is not improbably, as Audrey and Dalous hold, an expression of dystrophy of the whole epidermis. Darier himself has suggested that this remedy be tried, though not to the exclusion of local measures.

In *sclerodermia*, again, there is a presumption in favour of the efficacy of thyroid, for it has been held that the changes in the derma are the result of perversion of nutrition analogous to myxoedema, and Ehrmann has advanced the view that they are the response to an autoinfection commencing in the thyroid body, while Pedrazzini found that of 5 cases the thyroid was small and atrophied in 4. Sir William Osler, in 1898, did not go beyond saying, from his own experience in 6 cases and from results recorded by others, that thyroid treatment in this condition might "be tried without harm." Later reports are by no means unanimous, but there is a rather considerable body of testimony in its favour, among others from Lancereaux and Paulesco, Lustgarten, Ménétrier and Bloch, Picko, Jakimoff, Schamberg, and M'Master. Grünfeld and de Kornfeld have found thyroid treatment beneficial in sclerodermia, even when associated with Graves's disease. Léopold-Lévi and de Rothschild explain this result by the suggestion that Graves's disease and sclerodermia sometimes evolve upon a *terrain* of thyroid insufficiency. Of 9 cases of sclerodermia which they themselves submitted to thyroid medication the treatment was finally successful in 5, but it had to be perseveringly applied.

C. J. White of Boston[25] has reported great improvement from thyroid treatment in a case of *acanthosis nigricans*.

This affection, of which the pathology is not understood, may be referred to here; for although it is sometimes included among new growths, it was first designated, by Darier, *dystrophie papillaire et pigmentaire*.

CHELOID.

Cheloid appears to have been first submitted to thyroid treatment in the United States, by J. William White, who observed a lessening of the growth under its influence. Stelwagon employed it in several cases, in one of which there was material diminution of the growth. In my experience, it is distinctly useful in this affection, and I have been especially struck by its influence in alleviating the pain which is not infrequently a symptom of cheloid.

WARTS, ACNE, AND RHINOPHYMA.

Occurring as they do most commonly in children, and tending to disappear at puberty, *multiple warts* are possibly an error of development. Whether this be so or not, I have repeatedly found them disappear under thyroid medication. *Acne vulgaris* is another affection of childhood or adolescence which, in my experience, responds well to thyroid extract. In one case, that of a boy of 16 who had overgrown his strength, after a month's treatment the acne was considerably less, while the accompanying seborrhoea of the face and scalp had entirely cleared up and the general health had much improved. I have had equally satisfactory results in a number of other cases. Thyroid treatment is obviously indicated in *acne rosacea* occurring as a result of flushing in what, for lack of a better designation, I may term the pseudo-myxoedema sometimes associated with the menopause in fat women, who become dull and lethargic and depressed. In such cases I have found that the adiposity, the mental symptoms, and the rosacea have all alike responded to the treatment. Léopold-Lévi and de Rothschild report several cases of acne rosacea and acne vulgaris which were cured by thyroid treatment. In one, in which the skin affection was associated with menstrual irregularity, corpus luteum extract was combined with the thyroid treatment. A remarkable case of cure of *rhinophyma* after three months' thyroid treatment is reported by Dyer of New Orleans.

CUTANEOUS TUBERCULOSIS.

Lupus vulgaris is one of the affections in which thyroid treatment was first employed by Byrom Bramwell. In 1898 Pearce Gould[26] exhibited to the Clinical Society of London a woman of 47 in whom long-standing lupoid ulceration of the face, with tuberculous lesions in other parts, had completely healed over after three weeks' administration of thyroid colloid. Radcliffe Crocker is another of those who have reported favourably of thyroid medication in lupus. Pringle[27] has declared that it produces results little short of marvellous. According to him the cases which make the best response are those in which there is marked hyperaemia or inflammation. Both in lupus and in tuberculosis of the skin (*scrofulodermia*) I am able to report favourably of the treatment.

CUTANEOUS SYMPTOMS OF GRAVES'S DISEASE.

In exophthalmic goître, generally held to be due to excessive or perverted functioning of the thyroid, the cutaneous symptoms are the reverse of those met with in myxoedema: instead of coldness, dryness, and scaliness there are heat and moisture; pigmentary changes are not infrequent; and there may also be pruritus, factitious urticaria, and purpuric erythema; but in both conditions there may be loss of hair and atrophy of the nails. In Graves's disease thyroid treatment is, of course, contra-indicated; but there are cases on record in which cutaneous symptoms associated with some degree of overaction of the thyroid have been benefited by the judicious administration of thyroid extract. Those are cases, probably, of the "thyroid instability" referred to above, in which the thyroid makes an effort to compensate the defective action of some other gland.

AFFECTIONS OF THE HAIR.

The influence of the thyroid gland upon the growth of hair is unmistakable. In myxoedema, as already noted, the hair of the scalp becomes scanty, and the eyelashes and eyebrows, the pubic and axillary hair, often fall out, while under thyroid treatment there is a return to the normal. Hertoghe[28] records a case of entire baldness in myxoedema, followed by complete restoration of hair after the use of thyroid. On the other hand, in cases of thyroid excess there is sometimes hypertrichosis, manifesting itself in superabundance of growth, exaggeration of length, and growth in unusual situations, although in Graves's disease the hair often falls out, as in myxoedema. The hair of the face also may be affected by thyroid irregularity; with thyroid insufficiency the hair of the beard and moustache may fall, or its development may be retarded; with thyroid excess, spontaneous or due to medication, there may be growth of hair on the face in women, or black hairs may appear in the light-coloured beards of men. The colour of hair, too, is influenced by the thyroid, as is proved by return to the normal under thyroid treatment in cases of premature greyness. Examples of the effect of thyroid treatment upon the growth and colour of the hair in such affections as chronic rheumatism, sclerodermia, neurasthenia, migraine, and asthma, associated with various degrees of thyroid irregularity, are reported by Léopold-Lévi and de Rothschild.

There is reason to believe that the pituitary and the adrenals take part in the trichogenic function. Thus in hyperpituitarism there is marked hypertrichosis, while in hypopituitarism, though the hair of the scalp may not be affected, except in cases commencing in adult life, that of the axillae and pubes may be almost entirely lacking, or in males may conform to a feminine type of distribution. A case reported by Bulloch and Sequeira[29] seems to support the view that there is some relation, stimulative or inhibitory, between the functioning of the adrenals and the growth of hair. The patient was a girl of 11, who, normal up to the age of 10, then began to show precocious general sexual development, evidenced by increase in her size and bulk, by the onset of menstruation, by rapid maturation of the mammary glands, and by the growth of hair on pubis and face and axillae. All this time a tumour was growing in the abdomen, which was found *post mortem* to be a malignant hypernephroma. Their researches brought to light a number of similar cases, in which carcinoma or hypertrophy of the suprarenals was attended by precocious sexual development, and also cases in which suprarenal atrophy was associated with non-development or disappearance of pubic hair and by genital hypoplasia.

It has long been known that the growth of hair is also influenced, directly or indirectly, by the sexual glands. Arthur Keith,[30] in his masterly little book on *The Human Body*, remarks that in elderly women the withdrawal of the sexual secretion seems to allow the forces of growth to assert themselves: hence the growth of hair on the faces of elderly women. This ingenious suggestion finds support in the fact, observed by Aristotle, and confirmed by Sabouraud as the result of inquiries made in Constantinople and Cairo, that eunuchs do not become bald. Léopold-Lévi and de Rothschild incline to the view that the thyroid chiefly influences the hair of the scalp, and the sexual glands the pubic and axillary hair, and the beard. The whole subject needs much further investigation.

AFFECTIONS OF THE NAILS.

Both in myxoedema and in Graves's disease, and also in the intermediate degrees of thyroid disorder, the nails, as well as the teeth, undergo degenerative changes. Cases in which thyroid treatment exerted a favourable trophic influence upon the nails are recorded by Léopold-Lévi and de Rothschild. The new part of the nail, nearer the matrix, became normal in colour and thickness and texture, and, as is observed in convalescence from some acute affections, there was a furrow between the old part and the new. The number of such cases is not considerable, but they are sufficient to encourage the use of thyroid treatment wherever ungual affections not known to be of parasitic origin are associated with thyroid disturbance.

In hypopituitarism also there is dystrophy of the nails. They are frequently small, thin, and imperfectly developed; and Crowe has noticed that they do not show the crescents at their base.

PIGMENTATION.

There can be little doubt that the coloration of the skin is influenced by several of the internal secretions, and

also, it may be, by the liver and the abdominal sympathetic. It is significant that, as Rolleston[21] has noted, the pigmentation in Addison's disease is an exaggeration of the normal, and occurs, therefore, on the face, the neck, the hands, the anterior folds of the axillae, the nipples, the perineum, and the genitals, while in more advanced cases the mucous membranes may become pigmented. There is pigmentation also in hyperpituitarism, but it is often accompanied with asthenia and low blood pressure, which suggests that it may be due to adrenal insufficiency rather than to excessive functioning of the pituitary. The familiar pigmentary signs of pregnancy suggest that the sexual secretions may be concerned in normal coloration. There is evidence also that the thyroid is not without influence in this process. One of the signs of myxoedema is the yellowish tint which the skin may present, and Lancereaux and Paulesco, and others, have found that abnormal pigmentation is beneficially affected by thyroid treatment. In leucodermia favourable results from thyroid treatment are recorded, but the negative results recorded by other authors suggest that a careful selection of cases is necessary. The treatment appears to answer best in diffused cases.

Indications are not wanting that the rôle of the thyroid in coloration is of a regulative character. Arbuthnot Lane[22] has described the pronounced pigmentation met with in cases of alimentary toxaemia, beginning in the eyelids and thence spreading gradually over the face. The neck becomes first brown and then almost chocolate-coloured. The skin of the abdomen, the thighs, the axillae, and that covering the spinous processes of the vertebrae grows progressively darker, and on these surfaces areas of a still darker staining may develop. This observer also calls attention to the changes the thyroid undergoes in cases of intestinal toxaemia. In one case, in which the patient had for eight years suffered from an enlarged thyroid, it was obvious a few days after resection of the large intestine that the gland was diminishing in size, and by the time she left the hospital it was but little larger than usual. The case does not stand alone, for he had noticed the complete disappearance of symptoms of thyroid excess in other patients after operation for intestinal stasis. Such cases suggest that the thyroid may hypertrophy in its effort to antagonize the intestinal toxins to which in these cases the abnormal pigmentation is probably due. Possibly it is in this way that the effect of thyroid medication in improving the complexion is to be explained.

Thyroid Dosage.

So powerful an agent as thyroid extract must obviously be used with great caution, and its effects closely watched. As a rule I begin with a 2½ grain tabloid, to be taken at bedtime, and after a few days double the dose; then, if the remedy be well borne, a tabloid of the same strength is taken, in addition, after breakfast, and, later, another after dinner, and so gradually a maximum of 10 grains per diem is attained. For infants I begin with ¼ grain a day, increased to ½ grain, and occasionally to 1 grain. Experience is proving that small doses are as efficacious as the larger doses formerly given, and it is obviously desirable to run no avoidable risk of evoking symptoms of thyroidism, such as rapid pulse, nausea, headache, lumbar pain, restlessness. On the appearance of such symptoms the treatment must be at once suspended or the dosage diminished.

In cases treated with thyroid in which arsenic would be used, as in psoriasis, I usually employ the two agents together, and have found the combination answer admirably. I am glad to find myself in agreement on this point with Ewald and with Gauthier.

The Pituitary Body and the Skin.

That the skin and its appendages are subject to the influence of other ductless glands than the thyroid might have been anticipated from the interaction that has been proved to exist between these bodies, as well as between them and certain organs of external secretion—the testis and the ovary, for example—which also form internal secretions. As the result of this interaction there may be simultaneous functional disturbances in several organs of internal secretion, and thus may arise the clinical picture which has been designated pluriglandular or polyglandular insufficiency. In seeking for the causes of cutaneous affections the dermatologist must be prepared to take account of the pituitary body. The thyroid is so often and so greatly affected in acromegaly, and the pituitary in myxoedema and after experimental thyroidectomy, as to suggest not merely a complementary relation between these glands when either is the subject of disease, but even some measure of normal interaction—a suggestion which finds support in their histological resemblances. Harvey Cushing,[23] in considering the relations between the pituitary and the thyroid, points out that definite alterations in the thyroid have been reported by many observers in animals from which the hypophysis had been experimentally removed, and that in 24 acromegalics Furnival found only 5 thyroids that were normal, while Schöneman, in 85 cases of goitre, observed marked alterations of the pituitary in 84. In acromegaly there is increase in the size of the hair follicles and of the papillae, and, as the result of enlargement and abnormal activity of the secretory glands, the skin becomes moist and greasy. There is also hyperplasia of the connective tissue of the subcutis, which may involve the muscles, and while the process of hyperpituitarism is active there is, as is mentioned in an earlier paragraph, an unusual degree of hypertrichosis, strikingly exemplified in one of Cushing's illustrated cases. The transition from hyperpituitarism to hypophyseal insufficiency is attended by a very slow but unmistakable retrogression of the cutaneous symptoms. Just as the condition of the skin in Graves's disease is the exact reverse of that in myxoedema, so in primary hypopituitarism the cutaneous changes are the opposite of those in acromegaly. Cushing found that in all his patients affected with primary hypopituitarism, except the older ones, the skin was "smooth, transparent, and notably free from moisture." In some it had an infantile smoothness, such as might suggest a subcutaneous oedema, though there was no pitting on pressure.

In connexion with the pituitary I may refer to the rapid growth of the long bones which often follows typhoid and many other infections in young adolescents, and which comes under the notice of the dermatologist, because of the patellar and other striae produced by the tension to which the skin is subjected. In one of my own cases—that of a girl of 15, who had had scarlet fever—there were linear streaks on the thighs, abdomen, and breast, suggesting a general skeletal overgrowth. Jean Chanal[24] has suggested that the skeletal over-development is due to bacillary stimulation of the epiphyses, but I agree with Cushing that it is more likely to be the result of a functional hyperactivity of the pituitary, which sets free in unusual quantity the hormones that stimulate growth.

The Thymus and the Skin.

In view of the relation subsisting between the thymus gland and the sexual system, it is possible that to irregularity in the functioning of this gland may be due some affections of the skin that occur specially in childhood and adolescence. There is now reason for believing that the thymus continues to function regularly until puberty, and it has been found that in castrated animals the gland does not at puberty undergo hypoplasia. Although its secretion has not been definitely isolated, there is much to be said for the view that the thymus furnishes a secretion which is of service to the economy while the reproductive organs are undergoing development. Some cases of acne, therefore, may possibly be due to insufficiency or excess of its secretion. Similarly there appears to be some connexion, as Sabouraud has suggested, between large and active sebaceous glands and over-activity of the testicle; this may account for the frequency of seborrhoea in virile and hairy men and its rarity in women, who, when the subjects of it, are generally of the masculine type. It is significant that acne in women often coincides with the menstrual periods.

Thymus, Pituitary and Suprarenal Extracts in Skin Diseases.

Neither thymus nor pituitary nor suprarenal preparations have yet been extensively used in dermatology. But I have employed thymus gland extract with advantage in *acne* associated with enlarged thyroid and rapid heart, and have had encouraging results from pituitary gland extract, and also from suprarenal extract, in *persistent urticaria* and *angio-neurotic oedema*, conditions in which Ravitch and other French authors report improvement

under thyroid treatment. I have also found benefit to follow the use of suprarenal extract in *lupus erythematosus*, possibly owing to its influence upon the vasomotor centres. This condition is amenable to physicotherapeutic methods—to radium and carbonic acid snow; but it is not a merely local affection, and when the lesions disappear under local treatment there is always the possibility of recurrence to be reckoned with. It is desirable, therefore, that further trial be given to any agent which holds out the promise of beneficially affecting the constitutional condition.

UNSOLVED PROBLEMS OF DERMATOLOGY.

The influence which the thyroid, the pituitary, the thymus, and other glands exert on metabolism and growth, and so on the nutrition of the integuments and their appendages, suggests that further knowledge of their nature and functions will help to solve some of the many perplexing problems of dermatology. Bacteriology has accounted for not a few skin diseases, and vaccine-therapy and serum-therapy have now a recognized place in dermatological therapeutics; but there is still a disconcertingly long list of skin affections of which the cause is unknown and the treatment purely empirical. May it not be that of some of these the explanation will be found in overaction or underaction of glands that form secretions at once so potent and so difficult of analysis? The facts that animals from which the hypophysis has been partially removed betray diminished power of resistance to infections, and that pituitary hyperplasia has been found associated with bacterial intoxications, may possibly prove to be charged with significance. It is conceivable that irregularity of this or of other organs of internal secretion may be the direct cause of certain obscure skin diseases, and that in others it may induce the predisposing condition which is the opportunity of bacterial or other pathological influences. Thus, too, may possibly be explained the tendency of so many skin affections to recur after the lesions have disappeared under empirical treatment.

I will not pursue these speculations, tempting as they are. But I venture to think that the results yielded by organotherapy in a considerable number of skin affections are sufficient to warrant a more extensive use of this method of treatment in dermatology. It was by the experimental use of thyroid extract, for example, in such affections that we acquired the knowledge that now enables us in some measure to select the cases suitable for its exhibition, and only by the further use of this and other preparations in the same spirit, guided largely by the principle of analogy, will our knowledge be extended. That animal extracts must be employed with circumspection need not be said; but their effects are now tolerably well understood, and those who are practised in their use will be at no loss to recognize the conditions in which they are contraindicated.

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THE late Surgeon-General Sir Colvin Colvin-Smith, Honorary Surgeon to Queen Victoria, King Edward, and King George, an Indian Mutiny veteran, left estate valued at £10,708.

A Lecture
ON
SOME POINTS IN THE EARLY DIAGNOSIS OF CANCER OF THE STOMACH.

DELIVERED AT THE CANCER HOSPITAL, BROMPTON,

BY

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IT may possibly seem to some that as my contribution to this course of lectures I have chosen to speak on an unattractive subject. "What is the good," it may be said, "when you have diagnosed cancer of the stomach? You have diagnosed an incurable disease." There are three important considerations, however, a proper appreciation of which shows the subject to be one of great consequence.

1. *The incidence of the disease is high.* Cancer of the stomach is a very common disease, and it is becoming more common still. Half of all cancers originate in the stomach, and in men a larger proportion even than this. Whether a disease is, in its ultimate issues, incurable or not, if it is a common ailment and if it entails much suffering, it is essential that we should study it minutely and be able to recognize it at its earliest inception.

2. *The question of curability is probably in large degree a matter of early diagnosis.* This consideration not only holds good to-day, when the radical treatment of all cancers is by their surgical removal, but will no doubt hold good if and when the treatment of cancer proceeds along other than surgical lines.

Whatever chemical, physical, or biological principles govern the future treatment of cancer, it will be as important to begin the treatment at the earliest possible moment as it is now important to subject the patient at the earliest moment to a surgical operation.

3. *The differential diagnosis between cancer of the stomach and some other important, but less serious, maladies is often extremely difficult.* The thorough investigation of a case of suspected cancer of the stomach provides the best possible exercise of the clinician's powers, because of the large number and the great variety of observations that must be passed in review.

I do not intend to deal to-day with purely pathological points, such as the morbid anatomy or the histology of the disease, nor shall I treat of the help in diagnosis derived from chemical investigations made upon the stomach contents after giving a test meal. I shall confine myself to the purely clinical aspects of the disease—to the symptoms and signs that can be made out without the aid of special apparatus.

Briefly put, the problem is usually as follows: A man, about 40 years of age, consults us on account of dyspepsia. What are the conditions of his illness which lead us to suspect, and eventually to diagnose, gastric carcinoma?

I. HISTORY OF THE PRESENT CONDITION.

In the history there is one very material point that quite often emerges: it is that the dyspepsia has arisen, as it were, in the midst of health. The man is not, as a rule, a chronic dyspeptic. This is rather a striking fact. There seems no doubt at all in many situations as to the predisposing effect of chronic irritation in causing cancer; but chronic gastritis does not seem to lead to new growth in the stomach. Certainly, for one case in which this sequence is observed there are a dozen in which it is absent. The rule is that patients developing gastric carcinoma have, until the beginning of the disease, enjoyed good digestion. The exception that proves the rule is the passing of a chronic gastric ulcer into carcinoma, but this, though definite enough at times, is not at all a common event. A close analogy exists between this fact in the history of cancer of the stomach and a fact so often seen in the study of intestinal cancer—the difficulty with the bowels complained of by patients with this disease is very frequently their first experience of constipation. Chronic constipation does not lead to cancer, despite the theorists

who lay so much stress upon "intestinal stasis" as a cause of malignant disease. To summarize this point: as we should be very suspicious of constipation arising in a patient of 60 whose bowels have moved "like clockwork" until recently, so we should strongly suspect the state of affairs leading to dyspepsia of gastric type in a man of 40 who has formerly had no indigestion.

II. Symptoms.

1. *Anorexia.*—This is an extremely common symptom, too little emphasized by the textbooks. For a long time it may be the only symptom of actual gastric origin; it may be quite unassociated with pain or vomiting. Its degree may be very marked, amounting to a positive loathing of food rather than a merely passive lack of desire for food. I recently saw a patient who said that to hear the rattle of the tray as the servant brought the meal upstairs, before the smell of the food was apparent—and the smell often causes distress—created a most unpleasant feeling of loathing. This anorexia, with the loss of flesh and strength accompanying it, is itself enough to raise suspicion of cancer of the stomach if no other cause is found. The anorexia may be for all kinds of food; at times it is for meat only. It contrasts with the state of the appetite in most cases of simple ulcer; here the appetite is seldom lost, and is often excessive or capricious.

2. *Flatulence and Heartburn.*—Symptoms common to various stomach disorders, and to some that are trivial in their nature. They help little in the diagnosis of the case. There is, however, one point worth mentioning—that the feeling of distension, in the case of cancer, is but little relieved by careful choice of food. Removal of sweet stuff, and perhaps of all carbohydrates, from the diet, usually serves to diminish, it way be completely to abolish, the gastric distension present in ulcer or dilatation. This is rarely seen in carcinoma.

3. *Pain* is a very variable feature, perhaps the most variable of all. Occasionally it is quite absent, even thoughout the whole illness; it is sometimes a matter for surprise to see a patient with a large gastric tumour and extreme wasting quite free from pain. Unfortunately the contrary is the rule; cancer of the stomach is usually a very painful malady. The character of the pain differs from that of chronic simple ulcer; it is more constant, though it rarely rises to those severe heights of extreme and acute suffering seen in the hyperchlorhydria of ulcer. It is generally present as a persistent intractable ache—the worst sort of stomach-ache in fact. The pain more often involves the back in cancer than in simple ulcer and the radiation of the pain commonly suggests widespread gastric adhesion. "Hunger pain" is uncommon, food seldom giving complete relief, as is often the case in ulcer.

4. *Vomiting*, again, is a variable symptom, but it is more constantly present than in ulcer. When it occurs it less often brings relief of pain than in simple ulcer. And careful dieting less often checks it.

5. *Haematemesis.*—A frank bleeding—that is to say, the vomiting of a good quantity of fresh or recently clotted blood—is distinctly uncommon in cancer of the stomach. When it occurs it is often a terminal event, and is due to the ulceration of quite a large vessel, such as the splenic artery or the pancreatico-duodenal artery, the vessel having been caught up into the base of the malignant ulcer. A patient who faints, or who is left blanched, as the result of a severe haematemesis—or of a severe melaena, for the same argument holds good—is much more likely to be suffering from a simple ulcer than from a carcinoma. This point in differential diagnosis is not altered by the fact that the patient's age is over 40; chronic ulcer is not uncommon round about the age of 50, and occurs even later than this. It is not a single large haemorrhage but steady slight oozing that characterizes cancer. This oozing shows itself, by careful inspection of the vomit, in two ways: (*a*) By the so-called "coffee grouts," a sediment of dark brown material, sometimes only distinguishable from the dark residue of gastric stasis by spectroscopic examination; (*b*) by small black specks or shreds which are in reality small clots altered by the action of acids in the stomach. The identification of one or of both of these forms of blood is of the utmost importance. Single findings are not, of course, of nearly such significance as repeated findings.

6. *Loss of flesh.*—Despite the fact that some patients with gastric cancer lose no weight, or actually gain weight under preliminary treatment, the fact remains that the great majority progressively lose weight, and this in spite of treatment. In almost every wasting disease the patient may come under observation in a condition when the general nutrition is below that degree necessarily imposed by the extent of his lesion. No conclusion, therefore, should be deduced in this respect until he has been at rest and under treatment for about fourteen days. If, at the end of this time and despite treatment, the weight still falls, a case of stomach disease is almost certain to be either cancer or extreme pyloric stenosis, or, of course, a combination of both of these—that is, the observer is dealing either with a condition of relative starvation from mechanical obstruction at the pylorus or with progressive malignant disease. And it is not very difficult to decide between these two states. In connexion with chronic diseases of the stomach, therefore, careful periodic weighings are of the utmost importance.

7. *Loss of Strength.*—Asthenia is significant, but not very helpful in diagnosis, unless associated with definite evidence of stomach disease.

III. Physical Signs.

1. *Local Signs*—that is, signs elicited on examination of the abdomen and adjacent parts. These signs are found almost entirely by inspection and palpation.

(*a*) *Inspection* of the abdomen is of great importance, and is too often slurred over. For efficient observations a good light is essential, and the position of the observer should for preference be at the head and at the foot of the bed rather than at the side. In this way any asymmetry, however slight, or anything unusual in the curves of the abdomen, may be quickly detected. The effects of respiration upon the lines of the abdomen are carefully watched. It may be advisable to inspect the abdomen again after inflation of the stomach by gas. It is convenient to remember that the two common situations of gastric cancer are (1) the region of the pylorus and (2) the region of the lesser curvature and body of the organ. (Growth at the cardiac orifice and diffuse infiltration of the whole organ are types of cancer of much less frequent occurrence.) These two common forms present two different pictures: (1) Pyloric cancer leads to dilatation of the stomach—it may be great dilatation—with (at some time or other) a small tumour in the right hypochondrium. Here the signs of dilatation are seen, and usually of gastroptosis also. (2) Cancer of the body of the stomach leads usually to early fixation of the organ in a more or less normal position, with (at some time or other) a tumour in the epigastrium. In (1) there is apt to be a depressed epigastrium and a full hypogastrium; in (2) the epigastrium is apt to be full, the hypogastrium (relatively) depressed.

(*b*) *Palpation* of the abdomen is no less important than inspection. Here a warm hand is as much a desideratum for successful examinations as a good light was in inspection. The position of the patient is that in which the muscles are most relaxed. It is sometimes helpful to palpate the abdomen whilst the patient is in a warm bath. Palpation possibly discovers five things: (1) The position and size of the stomach if this is dilated; (2) the presence of a tumour; (3) rigidity of muscles; (4) tenderness; and (5) enlarged glands or secondary masses in other organs than the stomach. It is well to emphasize the importance of localized rigidity of muscle—a finding that is only secondary in importance to the discovery of a tumour. Constant rigidity of certain areas of the rectus abdominis, such as the upper part of the left rectus, in a case of suspected cancer on other grounds, is probably sufficient to justify operative procedure. For it must be remembered that this rigidity may conceal a tumour, and even if this be not the case, it is important to operate on gastric cancer before the growth is so large as to yield an abdominal tumour on examination. When rigidity is definite it is well to examine under chloroform; the absence of a tumour in these circumstances raises the question of chronic simple ulcer. In palpating for enlarged glands the region of the supraclavicular triangles must not be omitted.

2. *General Signs.*—These include some very important features.

(*a*) *Anaemia.*—Blood examination yields definite differential help between cancer and simple ulcer. For if considerable haemorrhage be excluded, the presence of any degree of anaemia greatly favours cancer—or, to be more accurate, it should be said that the absence of anaemia is much against cancer. In pyloric stenosis due to simple fibrosis, as from an old healed ulcer, wasting may be extreme, and yet there may be little or no anaemia; the condition is largely one of starvation, and in starvation the blood suffers relatively little. Whereas ofttimes a patient in whom the degree of wasting is less, but who suffers from gastric cancer, yields a red blood count and haemoglobin percentage considerably below normal. Too much importance can scarcely be attached to this point.

(*b*) *Fever.*—When fever is present in a chronic case of stomach disease, the nature of the disease is more likely to be malignant than simple ulcer. It is not, however, common—it is not nearly so common as in cancer of the large bowel.

(*c*) *Cachexia* is a late sign, and therefore one I will not dwell upon.

(*d*) *The tongue* gives very little, if any, help. Its state is very dependent upon local conditions, as of the teeth, pharynx, etc.

The data obtained as the result of all these considerations is supplemented by observations of the stomach contents removed after giving a test meal. It is important that more than one such observation should be undertaken. In some cases a series of *x*-ray pictures after a bismuth meal will still further assist the diagnosis. As the result of all these methods, and not as the result of any one alone, a diagnosis of cancer of the stomach should be arrived at as early as possible. In concluding, let me draw your attention to these two specimens in our museum; they both illustrate successful operations upon cases of cancer of the stomach. In the first the growth which you see was removed seven years ago; in the second, two and a half years ago. Both patients are to-day alive and quite well. Such results as these, albeit not common, should stimulate us to active and thorough efforts at early diagnosis of this important disease.

AN INSTANCE OF LARGE URETERAL CALCULUS AND SOME OTHER CASES OF CALCULI.*

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I record my five cases in which calculi have been removed by operation. Four were renal or ureteral, and in one a stone was excised from the perineum. In the cases of renal and ureteral stone the *x*-ray photographs proved very helpful.

Case I.

The first case is that of a girl, aged 16 years, from whom large calculi were removed from the pelvic portion of the right ureter by intraperitoneal operation. The patient was admitted to Addenbrooke Hospital under the care of Dr. Bradbury, by whose kindness I was called in to consider the case. It should be noted that there was very little in this girl's condition to call attention to her real malady. She was admitted with pains in the joints and epigastric pains; there was some swelling of the knee-joints on both sides; she had pain in the right side of her chest, aggravated by coughing, and had not felt well for a month. There was a history of pneumonia and pleurisy two years before, and frequent sore throat. The urine was acid, free from albumen and sugar. She was watched during five weeks until an access of fever and abdominal pain led to further examination of the urine, in which pus and blood were found, and some crystals of oxalic acid. Digital examination by the rectum detected a hard mass on the right of the uterus; under an anaesthetic this mass was felt to be fixed, but not connected with the uterus. The *x* rays made it almost certain that there were calculi in the ureter; a clear space was to be seen around the stones inside the ring of the true pelvis. As the patient's condition was certainly growing worse it was decided to operate. Her temperature varied from 101.4° on the day of admission to 104.2° on the day of operation.

Operation.—Through a median incision the abdomen was opened, and then with the patient in the Trendelenburg position two large calculi were found in the pelvic portion of the ureter. The stones were fixed and could not be pushed upwards or downwards. The ureter was clamped above, an incision was made, and the stones removed; about two ounces of purulent urine was swabbed out. The ureter was sewn up with catgut, using a harelip needle. The patient was then placed in the horizontal position and the suturing tested, so that the pressure in the ureters was tried in two positions. The clamp was removed and the abdomen closed in the usual way without the use of drainage.

In this case the calculi were so deep in the pelvis as to make it a question whether it would not be better to pursue the bolder course of operating through the peritoneum rather than by the usual extraperitoneal route. In the latter procedure the consideration of the large size of the wound, the difficulty of suturing the ureters, and the certainty that a drain would have to be used, with long delay in healing, decided me to venture on the operation above described, in spite of the very real risk of leakage of purulent urine into the peritoneal cavity. However, a good recovery was made, the temperature came down at once to normal, and except for washing out the bladder with boric lotion there was no trouble with the nursing. In textbooks the extraperitoneal method is recommended. But it is obvious that methods may be combined of operating through the peritoneal cavity and then making a drain from the pelvic basin to the exterior, directed from within by a limited incision. There is the possibility also of pushing the stone upwards to the pelvis of the kidney or downwards to the bladder. The two narrow points where stones commonly lodge are just below the kidney and, lower down, some two inches above the bladder. In the pelvic end of the ureter stones are fortunately not so often found.

It has chanced to many surgeons, as it has chanced to me, to cut through a healthy ureter which has become involved in a tumour, and on the ureter being carefully stitched no trouble beyond anxiety to the surgeon has resulted. But in dealing with pathological cases in which the ureter is dilated and contains urine loaded with bacilli, the risks must be serious. With regard to the technique of the operation, there is much to be said in favour of an intestinal needle instead of a harelip needle unless the tissues are very thick, but in any case catgut, not silk, should be used lest a crust should subsequently deposit on the silk. The stones removed from Case I were of large size. Together they measured 2½ in. by 1 in. diameter, and their weight when dry was 226 grains and 91 grains = 317 grains.

Case II.

The next case is that of George S., aged 23, who had calculi in both kidneys. The stone in the right kidney was first removed. In this operation there was nothing unusual and a good recovery was made, but on the left side there was a great collection of pus, and as the stone in the ureter could not be reached from the loin, a large drainage tube was put into the abscess cavity, and when a certain stage of recovery had been reached and the cavity had contracted, an abdominal intraperitoneal operation was planned and the stone pushed into the kidney. This done, the incision in the loin was enlarged along the drain tube, and the stone extracted with a scoop. The patient made a good recovery, and wrote to the hospital on May 23rd to state that he was well and about to start work.

Case III.

This was a chauffeur, aged 28, who had continued his work until his admission to hospital under the care of Dr. Bradbury. He had pain in the left loin, which had begun only about five weeks previously. He had passed blood on one occasion only; it was after taking urotropin. About a year previously he had an attack of appendicitis, but recovered without operation; thirteen years ago he had had a vesical calculus removed by lithotrity. On admission there was tenderness over the left renal area; the urine was loaded with pus, but showed no blood or casts, and a skiagram demonstrated calculi in the left kidney. At the operation were removed masses of phosphatic débris too friable to hold together in the scoop, and the whole kidney was distended with purulent urine and in a state of phosphatic pyelonephritis. Thorough douching was used to clear the cavities of crusts as well as possible, and a large drainage tube inserted.

The patient did well, but there was pus in the urine for some weeks, and an *x*-ray photograph taken since the operation still shows the shadows of phosphates. His general condition is excellent.

Case IV.

This was a countrywoman, who, though stout, looked pale and feeble; she had been ill and in great pain for many months past, and had constantly passed large quantities of pus with the urine. Finally, when absolutely obliged by her malady, she sought relief at the hospital. With all her stoutness it was

* Read before the Cambridge and Huntingdon Branch of the British Medical Association.

possible to make out a swelling and a dull area at the seat of her pain in the left lumbar region, and a skiagram showed a collection of stones. It was evident that an operation was her only chance. Despite her wretched condition it was undertaken. An incision resulted in the removal of a quantity of stones and of a large amount of pus from an enormous loculated abscess. She rallied somewhat and gave hopes of recovery, the pus draining well from the inserted tube, but after a week the struggle proved too much for her enfeebled powers, and she gradually sank and died nine days after the operation.

There was no fair chance for surgery in this case, the patient having delayed too long. The operation was borne fairly well, but there seemed no recovery power, and probably there was very little actual kidney tissue left remaining.

The last case to which I propose to draw attention was one of calculus in the perineum.

Case v.

The patient, a labouring man aged 33, came under my care in the hospital on April 24th, 1912, with a sinus in the left side of his scrotum, which discharged pus and urine. The left testis was absent, and he had a right scrotal hernia. He had been at work up to the end of 1911, when he had an attack of influenza; and it was only since then that he had noticed discomfort and discharge. A catheter passed into the urethra struck a stone about the position of the triangular ligament; and two days after his admission an incision down to this point was made and the stone removed. It measured 1⅜ by 1¼ in., and must have been forming for a long time. It was very firmly impacted in the perineum under the pubic arch, and projecting into the urethra, and thus blocked it. The septic condition of his scrotum prevented me from examining the bladder lest it should be tainted by the catheter or sound. During his convalescence from the operation the sphincter of the bladder worked perfectly, the patient passing water like a woman, until the wound had granulated and healed up; he recovered without the recurrence of any cystitis.

This, therefore, was an extravesical stone when extracted, but had its origin in the kidney or bladder, whence it had travelled into the urethra, and there ulcerated through the mucous membrane, and gradually grew into the perineum along the lines of least resistance to its present size. The patient did all the work of a labourer on the land until shortly before the operation, but never rode a bicycle.

The *x* rays proved a very valuable help in the diagnosis of these cases, as also in their operative treatment; and I am grateful to Dr. Scales for his co-operation, especially for the picture of the large pelvic stone in the young female.

TREATMENT OF CONGENITAL DISLOCATION OF THE HIP.

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Surgeon to the Royal National Orthopaedic Hospital, etc.

[With Special Plate.]

Since Lorenz, in 1895, first introduced his operation of "bloodless reduction" of congenital dislocation of the hip, treatment of this affection has become well established in orthopaedic practice, and it is attended, in the majority of cases, with the happiest results.

Many surgeons, however, have not made themselves acquainted with the progress of this branch of surgery during the last eighteen years, and even now one hears the old objection that in congenital dislocation treatment is useless, and that the acetabulum is absent, or at least so small that the head of the femur cannot be placed therein. But orthopaedic surgeons know that an acetabulum of some sort is always present, except in some old untreated cases in which, in the course of years, it becomes obliterated; and the argument that it is too small is a relic of obsolete pathology, for, however rudimentary it may be, it is still sufficient. It is many years since we were taught to believe that bone is a rigid, unalterable structure. We know now that bone, like other tissues, is capable of undergoing plastic changes in obedience to forces acting upon it; an angular deformity in fracture becomes buttressed by new bone on one side and rounded off on the other; the bones of the foot become changed in shape, both in the development and in the cure of deformities; similar changes occur in the spine, the chest, in fact in any part of the skeleton. It is proved beyond question that in congenital dislocation of the hip, if the head of the femur is placed and retained "in," "on," or "against" the acetabulum, the bone grows out around the head, the acetabulum becomes deeper and the head better developed, so that a joint is formed which is anatomically and functionally sound.

The majority of surgeons who deal with these cases have adhered more or less closely to the technique described by Lorenz; indeed, many still follow his original teaching in every detail. But it must not be supposed that the surgery of congenital hip has stood still for eighteen years. Many modifications have been introduced during that time—some good, and some bad—and, while the general principle of Lorenz's pioneer work remains the same, there is no doubt that just as good results—and in many cases, I am convinced, much better results—can be obtained by a technique which differs in many ways from the original.

I do not propose to describe the details of Lorenz's procedure here, but some criticisms of the method must be made.

I.

As every one knows, the first step in Lorenz's "bloodless" operation is to stretch or tear the soft parts around the joint; the adductor muscles are ruptured by forcible abduction and hacking with the hand; the parts behind and in front are stretched by forced flexion and hyperextension, and those above by traction on the limb. It is taken as an axiom that the hip cannot be properly reduced until all the soft parts are so stretched as to offer no resistance. This is not true; for in the majority of cases the hip can be reduced without any of these violent preliminaries, which are responsible for most of the shock and for nearly all the accidents of the Lorenz operation, and which, in addition, greatly weaken the muscles of the thigh.

The constant pull of the muscles upon the femur is the most important factor in bringing about the development of the joint, and, provided that the head of the bone is in place, the more powerful the muscular retraction the better. The muscles should therefore be damaged as little as possible.

II.

Many surgeons do a preliminary tenotomy, sometimes an extensive division, or even partial excision, of the adductors, in order to facilitate stretching. This, I am convinced, is a great mistake. I have seen a number of cases in which there was a wide gap where the adductors had been divided. Some of these cases had been successfully reduced and had good hip-joints, and yet they walked very badly. The disability in many of these cases is, I believe, due to permanent weakness of the adductor muscles, the gait being comparable in every way to what is often seen in cases of infantile paralysis when the adductors are affected, and the child, to compensate for the weakness, throws himself on to the head of the femur at each step, so that he sways from side to side. Simple tenotomy of the adductor longus is sometimes necessary in old and resistant cases; as a routine it is to be condemned. When a congenital hip is reduced and fully abducted, some muscles are bound to give way, but the damage should be limited to this, and unnecessary interference avoided.

III.

In the earlier attempts to treat congenital hip, the great difficulty was the tendency to redislocation of the head of the femur backwards. To overcome this, Lorenz introduced his "frog" position, in which the thigh is fixed in right-angled abduction and external rotation, the knee being actually behind the plane of the hips, and this position is still used in the majority of cases immediately after the hip has been reduced.

But the fear of reluxation has been exaggerated. In the Lorenz position the head of the femur is thrust forwards and tends to project in front; often it passes in front of the acetabulum, and an anterior transposition is the result. Anterior transpositions are so common after the Lorenz technique that some surgeons have even counted them among their "successful" results! It is

true that, compared to an untreated dislocation, the functional result of anterior transposition is often very good, but it cannot for a moment be compared with that of true reposition. The head should be placed *in* the acetabulum, and nothing short of that can be called a success.

When the Lorenz position is maintained too long, the retraction of the soft parts behind is so great that the thigh cannot be rotated inwards. Consequently after this treatment one sees many cases of persistent external rotation (often associated with anterior transposition), which gives rise to great disability, and is most difficult to treat. The Lorenz position should be employed until the tendency to backward displacement is overcome—that is, a comparatively short time—after which the thigh should be placed in a position of *internal rotation*, which gives a much more perfect apposition of the head of the femur and acetabulum, and which also allows retraction to take place more equally all round the joint.

IV.

When the hip is successfully reduced, there is considerable tension on the muscles of the thigh, especially on the hamstrings, which keep the knee tightly flexed. Great stress is laid by Lorenz and his followers upon the stretching of these muscles by daily extension of the knee soon after reduction. I believe this to be absolutely wrong. The surest way to induce redislocation of the hip is to stretch the hamstrings early by extension of the knee. The force of such stretching acts obliquely upwards on the femur, and if there is any possibility of the head slipping sideways from the acetabulum, it will be made to do so. The fear of permanent flexion of the knee is unfounded. Personally I make a point of including the knees, flexed, in the first plasters, so as to ensure that they are left alone. I have had them fixed in this position for upwards of eight months, and I have never had any trouble in getting them straight afterwards. In the second position of the hip it is necessary to include the knee in order to secure internal rotation.

V.

Another fallacy of the Lorenz after-treatment is the alleged importance of "grinding" movements of the head of the femur in the making of a new acetabulum. To this end the child is encouraged actively to use the limb within the restrictions imposed by the plaster. The knee being left out, some rotation of the femur is possible, and it is a common practice to put the child astride on a low chair or hobby-horse, and to let her push herself about with a leg on each side; then she is taught to walk, and the activity such patients display in their plasters is often surprising. All this, as I have said, is to encourage "grinding" of the joint. It is thought that the grinding or boring motion of the head of the femur is a most important factor in deepening the acetabulum and in promoting the formation of new bone around it.

I belive this is a notion derived from a false analogy. We know that in certain fractures which fail to unite, constant movement is a factor in preventing repair; and that when a false joint forms the opposed ends of the bone become smooth, rounded, and to some extent mutually adapted by friction and pressure; friction, too, is mainly responsible for the development of a false capsule to the joint. But in congenital dislocation of the hip totally different conditions obtain. The head of the femur and the acetabulum are both covered by cartilage, and all the elements of a joint are present. The aim of treatment is to secure *stability*. The changes in the bones are brought about, not by friction, but by constant unchanging *pressure*. The source of this pressure is the pull of the thigh muscles upon the femur, and this pull is constantly acting when the head of the bone is in place. Under the influence of this force, if the limb is left absolutely undisturbed, the acetabulum can be seen (by x rays) to become deeper, the head of the femur is better developed, and a buttress of new bone grows up from the margin of the acetabulum around the head until a secure joint is formed (Fig. 2). Then, and not till then, should the child be allowed to use the limb. Activity before this stage can only make for instability. By movement the pressure is distributed over a wider area, instead of being concentrated on the centre of the joint; the acetabulum becomes wide and shelving instead of steep and abrupt; the capsule is looser all round than if the joint had been kept still, and, lastly, movement is a potent cause of redislocation.

VI.

Ultimately, when the plaster is removed and the child is allowed full freedom, she rapidly regains her strength and normal use of the limb, *provided that the hip has been properly reduced*. I have never found it necessary to order special exercises, massage, or manipulations to strengthen the muscles or to obtain movement in these cases. Children do not waste to a skeleton through mere inactivity. In cases of tuberculous disease of the spine or hip we see children immobilized, sometimes for years at a time, and yet, as soon as they get about, they pick up all they have lost. During recumbency they are for the most part plump, and merely "out of condition" in the athletic sense. In congenital dislocation of the hip persistent weakness after reduction is due to gross injury of muscles; restricted movement is due to faulty reduction.

The Reduction of Congenital Dislocation of the Hip.

By far the best method with which I am acquainted is that of reduction over the *inferior* border of the acetabulum, advocated by Ridlon. It is performed in the following way: In the case of a left hip the knee is grasped with the right hand, and the limb is fully flexed both at the hip and the knee; the head of the femur is thus directed downwards. Pressure—and, if necessary, great pressure—is now made straight downwards upon the knee, so that the head of the femur is driven down below the acetabulum; counter-pressure is made by the other hand upon the tuberosity of the ischium, and the position of the femoral head is made out by the fingers of that hand feeling in the buttock. The descent of the head is increased by internal rotation of the thigh, but, as Ridlon has pointed out, it may even descend too low for easy reduction. When the head has thus been brought below the acetabulum, the thigh is slowly abducted; the head then passes upwards over the lowest part of the rim into the acetabulum.

The simplicity, rapidity, and ease of this reduction, as compared with the Lorenz method, is often surprising. In the latter the hip is reduced over the *posterior* margin of the acetabulum, with the thigh abducted to a right angle. To do this successfully, the head of the femur must first be brought down to that level by tearing and stretching the soft parts. But in reduction over the inferior border no preliminary violence is employed; the limb is not previously pulled about in any way; descent of the head is secured by the position of the limb and by direct pressure downwards on the femur; when the thigh is abducted the muscles aid rather than oppose reduction.

The elimination of unnecessary violence is a great advance in the treatment of congenital hip. Shock is infinitely less; the risk of accident—fracture, paralysis, etc.—is reduced to a minimum; permanent weakness of the muscles is avoided, and their important action during after-treatment is better preserved.

One other advantage must be specially mentioned. In the treatment of congenital hip it is generally agreed that there is an age limit beyond which it is inadvisable to attempt reduction—usually about eight years in bilateral, and about ten years in unilateral, cases. This restriction is imposed on the Lorenz operation on account of the great violence required to stretch the soft parts in older patients, whereby the severity of the operation is proportionally increased, and the risks of serious accidents are very much greater. But, as I have already said, in reduction over the inferior border, these preliminary forcible manipulations are avoided, so that the same objections do not apply to this method. Accordingly, the scope of the operation has been considerably extended in recent years, and many older patients are treated now than formerly. It is not to be denied that the difficultes increase with age, but provided that they can be overcome, there is *no age limit*, as such, to reduction of congenital dislocation of the hip. The limit is reached, in an individual case, when the operator ultimately fails to get the hip in. I have emphasized this point because many surgeons maintain that it is unjustifiable to attempt reduction over a certain age. Many patients are, therefore, passed over who at the present day certainly ought to be

given a chance. The ideal of treatment is to benefit the greatest possible number of patients, and if there is any possibility of getting a hip in without serious injury to the patient, it should be attempted. It may be said in passing that the age of a patient is not always a sure guide to the difficulty of reduction; a case of 14 or 15 may prove to be easier than one of 4 years old; often in bilateral cases one side is much more difficult than the other; some of the most difficult cases are in quite young children.

Treatment after Reduction.

As soon as the hip is reduced it is put up in plaster-of-Paris while the child is still under the anaesthetic. At this stage the Lorenz position—that is, abduction to a right angle and external rotation—is adopted, but it should be seen that the head of the femur is not displaced too far forwards. *Both* sides should be put up, even when the dislocation is unilateral; though in the latter case the sound hip need not be forced into full abduction, but should be put into as nearly a symmetrical position as it will go. A unilateral plaster is unsatisfactory, as it does not fix the hip properly. Also, I always make a point of including the knees in the plaster, so that no stretching of the hamstrings is possible.

Skiagrams should be taken before and throughout the treatment, and the position of the head of the femur should be checked by them. The position is often spoken of as being "good," "fair," or "nearly in." But there are no degrees in reduction of congenital hip—the hip is either in or it is out. If it is in, well and good; if it is out, the plaster must be cut off and one must begin again by reducing it.

One is often asked how long the first plaster should be left on, but it is impossible to give a fixed time for all cases. It is determined in each case by the conditions found at operation and after. In an average case, where there is fair stability on reduction, it is left on for three or four months, and at the end of that time the hip is examined, and according to the degree of stability present it is decided whether to change the position or not. The hip should never be allowed to redislocate in order to estimate its stability. Cases which are very difficult to reduce, and also cases which are very easy, as a rule require longer fixation than others. Often the more easily a hip slips in the more easily will it slip out and the longer will be the time required to make it firm. In some very mobile cases—especially in some which had been unnecessarily stretched—I found that the only way to prevent redislocation was to keep the hip in the first position for a year. On the other hand, it must be remembered that fixation for too long a time in one position may give rise to difficulty later. The time must be separately determined, not only for each case, but, in bilateral cases, for each hip.

When sufficient retraction has occurred in the soft parts behind the hip, the position of the limb should be changed.

The second position is one of slightly diminished abduction with about 45 degrees of *internal rotation*. This brings the centre of the head of the femur into more perfect apposition to the acetabulum; it removes the tendency to anterior transposition; and it allows a more equal retraction of the soft parts around the joint. An anaesthetic is necessary for this change, and the position is secured by a plaster which again includes the knee, flexed. In a bilateral case each hip is treated according to its own indications; so that either the position may be symmetrical, or one hip may be in the second position while the other is still in the first. In a unilateral case the sound thigh is brought down straight, and the upper part of it is included in the plaster.

This plaster is left on as a rule for four or five months, after which a fresh one is put on in still further diminished abduction, and this time leaving the knee out. In a unilateral case, only the affected side need now be put up. If there is any contraction of the knee it is soon overcome; and then, provided that the hip is firm, the child is allowed to walk, the sole of the boot on the affected side being raised about 2 in. to keep the limb abducted. In a bilateral case if one side is more advanced than the other, it must wait until both are ready for the child to walk, and of course no raising of the boot is necessary.

When I first adopted fixation of the knee in the plaster I expected that some contraction of the hamstrings would follow, and I was surprised, on cutting off a plaster after eight months' continual flexion, to find that the knee could be straightened at once without any force. This I have since found to be common, and when slight contraction does occur it is always easily worked out in a few days by ordinary manipulations. I have never had any difficulty in getting the knees straight, and as I believe that it is important to leave the muscles alone until the hip is firm, I never have any hesitation in fixing the knees during the earlier stages of the treatment.

The last stage of the treatment consists in gradually reducing the amount of abduction and in deciding when to allow the child to go free. The skiagrams should now be showing a well-marked formation of new bone above the acetabulum, the cavity of which is better developed, as is also the head of the femur. These changes indicate that redislocation will not take place, and the child may safely be allowed to go without plaster. The last remnant of abduction is left for the child to get rid of, and, if a good joint has been formed, she quickly does this, and in addition recovers full use of the hip.

Naturally, plastic changes occur more readily in the growing bones of young children than in the denser, more mature bones of older patients. The fact that reduction may be attempted at a later age *in neglected cases* must not be taken to mean that treatment may safely be deferred while the child is young. To obtain the best results congenital dislocation of the hip must be treated in *early childhood* while the growing bones are soft and readily adaptable. Only in neglected cases does the question of late treatment arise, and in these cases it is determined by (1) the possibility of getting the hip "in," and (2) the probability of a stable joint forming within a reasonable time.

It has been shown that, if time is no object, bone changes similar to those which occur in children may be brought about, even in adults, by a constantly acting force. Thus in the old days of exclusively instrumental treatment of deformities, extreme cases of genu valgum, etc., were *cured* by apparatus which was worn sometimes for any period up to fifteen or twenty years. Such slow progress is not tolerated at the present day, and, of course, it is out of the question in the case of congenital hip, where the patient cannot get about until the joint is firm. The example merely serves to show that plastic changes can be brought about in a mature skeleton, though much more slowly. In late cases of congenital dislocation of the hip the question is whether sufficient stability can be secured within a reasonable time. If there is a fairly good acetabulum and fair stability on reduction the ordinary routine treatment may be successful, but failing this the only alternative is an open operation to make an acetabulum—that is, by cutting it out. The open operation has given good results in a number of selected cases, but it is exceptional treatment to be reserved for old cases, and its performance as a routine in young children is to be absolutely condemned. The best results in congenital dislocation of the hip are obtained by manipulative reduction in early childhood, and they are incomparably superior to those obtainable by any other method of treatment.

IN a speech recently delivered at the general meeting of the Society of Preservation against Tuberculosis, the French Minister of the Interior supplied the following figures as to tuberculosis which he said no one could dispute. Of the total number of deaths in France a proportion of 12.07 per cent. is due to definitely recognized tuberculosis, a figure higher than that of all other diseases. The proportion is higher in France than anywhere else. Moreover, during a period of three years 217 deaths per 100,000 inhabitants have been recorded, as compared with 139 deaths in Belgium, 166 in Italy, 146 in England, and 168 in Germany. The evil appears still more serious when it is considered that it is especially in persons between the ages of 20 and 40 that tuberculosis is particularly frequent. Of 100 French men and women who die at that age, 42 die of tuberculosis. In Paris the mortality from tuberculosis in 1909 was 44 per 10,000 inhabitants. The proportion was 33 for the department of the Seine, 30 for the Seine Inférieure, 27 in the Cotes-du-Nord, 26 in the Finistère, L'Ille et Vilaine, Loire Inférieure, and the Rhone. In the Hautes Alpes it fell to 10.

CONGENITAL DISLOCATION OF THE HIP (MR. A. S. B. BANKART).

FIG. 1.—Congenital Dislocation of Left Hip. Boy aged 3½ years. Before treatment. B, Upper epiphysis of femur. (Skiagram by Dr. Stanley Melville.)

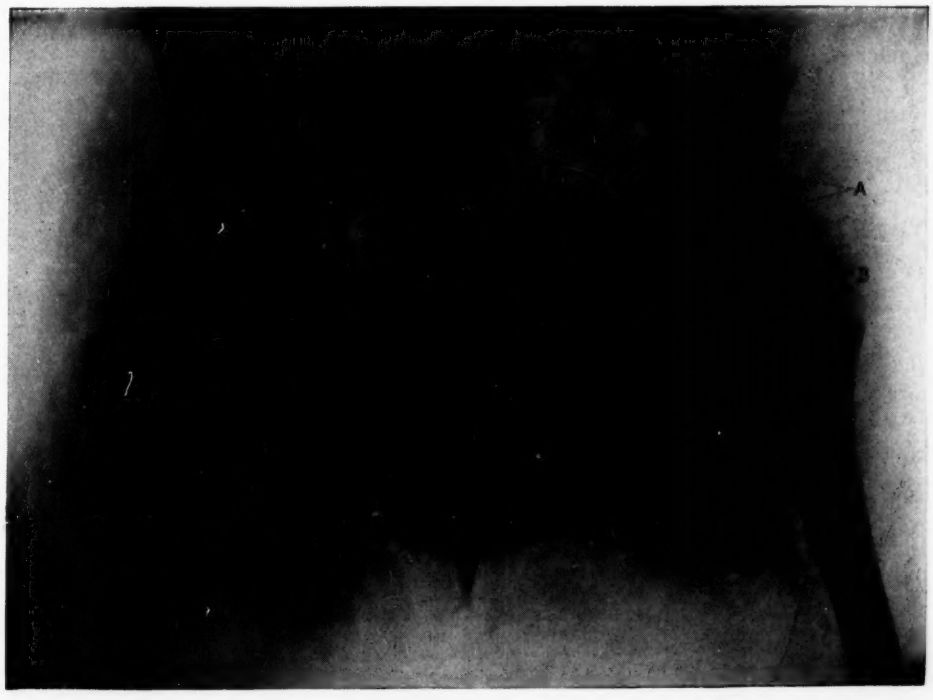
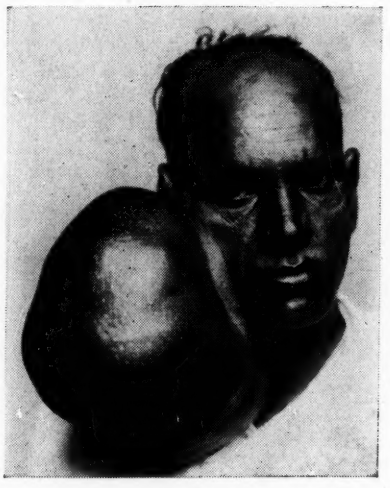


FIG. 2.—Congenital Dislocation of Left Hip. Same case as Fig. 1, ten months after reduction. A, Buttress of new bone at upper margin of acetabulum. B, Upper epiphysis of femur.

PAROTID TUMOURS (PROFESSOR A. STREET, I.M.S., BOMBAY).

CASE I. Hindu, aged 48. Tumour had existed since childhood. Weight, 7 lb. 3 oz. Perithelioma.



CASE II. Hindu, aged 35. Weight, 5 lb. 4 oz. Ten years' history. Endothelioma.

CASE III. Hindu, aged 40. History, 5 years. Weight, 6 lb. 8 oz. ? Round-celled sarcoma.

CASE IV. Hindu, aged 25. Weight, 2 lb. 12 oz. Ten years' history. Myxoma.

A SERIES OF CASES OF PAROTID TUMOUR.

[WITH SPECIAL PLATE.]

BY LIEUTENANT-COLONEL A. STREET, M.B., F.R.C.S., I.M.S.,

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THE following cases were reported by me at the meeting on June 20th, 1912, of the Bombay Branch of the British Medical Association, but as there was a full account of one such case reported in the JOURNAL of June 8th from China I think these, with the accompanying photographs, may be considered of sufficient interest to be published in the JOURNAL.

They were all operated on by me at the Jamsetji Jeejeebhoy Hospital, Bombay, and all recovered without any troublesome symptoms. The four operations were all performed under chloroform, and the dragging and weight of the tumour in no way caused difficulty in its administration. During the removal of the tumour very little difficulty was experienced, and afterwards the main trouble was that nearly all the veins required ligature, the walls being too thin to stand torsion, and if only clamped were liable to restart bleeding when sponged. The amount of skin that needed removal was more than one would have expected at first, and owing to only a small piece having been removed in the first case there was some bagging and collection of serous fluid which delayed healing till it could be drained away. The duration and the weight of the tumour had completely destroyed the elasticity of the skin, and the amount of stretching it had undergone is well shown in Fig. 2 by the distance between the pores.

The clinical history was much the same in all; one had existed for forty years, two for ten, one for five. The growth of the tumours had been slow and even, except in No. 3, which had spurted the last year. The tumours were painless, not tender, freely movable, and the skin was only adherent in places where cauterization and then healing had taken place; but the skin in all showed where cauterization as applied by the native Hakims had been tried. One man came from Ratnagiri in the south, one from Poona in the east, one from Surat, and one from Cutch in the north. They were all Hindus and males. They gave their ages as 48, 40, 35, 25. Two, at all events, confessed that the reason they wanted operation was that they were waiting to get married. Their clinical history and description was practically the same, and the naked-eye section did not reveal much difference, some being more nodular both on the surface and on section than the others; very few, and small, cysts were found in all. No glands were found enlarged in any case.

A portion of each growth was sent to the pathologist of the hospital for examination, with the statement that it was part of a parotid tumour. His report, however, showed very considerable difference. No. 1 was stated to be perithelioma; No. 2, endothelioma; No. 3, round-celled sarcoma; No. 4, myxoma—a mixed tumour. No. 1 weighed 7 lb. 3 oz.; No. 2, 5 lb. 4 oz.; No. 3, 6 lb. 8 oz.; No. 4, 2 lb. 12 oz.

This series seems interesting on account of the large size of the growths, and the fact that they should come from north, east, and south within a period of six months.

PROFESSOR BLANCHARD reported recently to the French Academy of Medicine the occurrence of a tapeworm in man previously known as infesting the orang-outang only. It was passed by a girl aged 8 in Mauritius. It belongs to the genus *Bertia* (now *Bertiella*) formed by Professor Blanchard in 1891 to receive two cestodes of the anthropoid apes, *B. studeri* of the chimpanzee, and *B. satyri* of the orang-outang. Apart from the interest of the communication due to the addition it makes to the ever-growing list of human parasites, it raises a curious point in zoological distribution. This parasite has now been found on opposite sides of the Indian Ocean, in the ape in Borneo and in man in Mauritius, and so far in these localities only; but Professor Blanchard points out that this is not a solitary instance of the wide distribution of a cestode. *Davainea madagascariensis* (a parasite of man) first identified in the Comoro Islands north-west of Madagascar, has also been found by Leuckart in Siam, and by Daniels in British Guiana.

CHRONIC ARTHRITIS:

THERAPEUTIC EVIDENCE OF THE INCIDENCE OF STREPTOCOCCAL INFECTION.

BY D. W. CARMALT JONES, M.D., M.R.C.P.,

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IT is a commonplace that accurate bacteriological diagnosis is essential to the successful treatment of bacterial infections by specific therapy. Yet in many cases this diagnosis is so difficult that it is abandoned, and frankly empirical methods of bacterio-therapeutic treatment are adopted, with necessarily variable results; still, some information of diagnostic value may be gathered from the results obtained in a series of empirically treated cases.

In practice, bacteriological diagnosis for therapeutic purposes is made by direct or indirect methods, or a combination of the two. The direct method consists in the recovery of bacteria of known infective nature, such as the *Bacillus tuberculosis*, from any part of the body, or of bacteria of any kind from sites normally sterile, such as the blood stream or the joints.

The indirect methods consist in the estimation of "reactions," either "immunity reactions" or "constitutional reactions." The "immunity reactions" depend on the power of the tissues to elaborate antibodies to any foreign albuminous substance introduced into them which is capable of solution in the body fluids. The antibodies are produced in excess of the amount required to neutralize the foreign substance, and the residue passes into the blood and can be demonstrated by suitable methods in the drawn blood serum. The bactericidal, bacteriolytic, or agglutination reactions are those most generally available. The opsonic reaction is similar, but presents certain differences.

The "constitutional reactions" depend on the peculiar sensitiveness of a person suffering from certain specific diseases to inoculation with minimal doses of the infecting organism or its products, a rise of temperature and local signs at the site of inoculation occurring in a susceptible person which do not arise in healthy people; this is the basis of the various tuberculin tests.

These two methods are applicable to infections with bacteria of known virulence, and are comparatively straightforward procedures, but much of the difficulty in bacteriological diagnosis is due to the fact that many organisms are only potentially infective, since they are constantly present on the mucous surfaces of quite healthy persons as harmless parasites, and only occasionally give rise to disease. When definite pathogenic bacteria cannot be found, organisms of potential infectivity may be taken from any breach of surface or from one of the mucous membranes, and the immunity reactions of the patient's blood may be investigated. Instructions to carry out these tests so often turn out to be a counsel of perfection, that treatment is frequently invited with a general recommendation to do the best one can.

To do this it is necessary to hazard a bacteriological diagnosis on clinical grounds, and in these circumstances it is as well to give a guarded prognosis, nevertheless the clinical diagnosis of some bacterial infections is made every day with tolerable accuracy. Such a diagnosis, however, can only be made on the strength of numerous previous observations, in which a group of symptoms and physical signs have been demonstrated by recognized bacteriological methods to be constantly associated with a certain infection. Any bacteriological evidence, therefore, which associates a disease of obscure causation with a definite infection is an addition of some value to the knowledge of the etiology of that disease.

In reviewing the indirect methods of bacteriological diagnosis, mention was made of "constitutional reactions," meaning general and local disturbance set up in susceptible subjects by small doses of bacterial substances. Another form of constitutional reaction is complete or partial recovery from a given disease under treatment by specific antibacterial methods, but since diagnosis should precede treatment this method is not available for purely diagnostic purposes. However, the records of results of similar cases treated empirically by the same specific remedy afford

bacteriological evidence which may be of value for clinical diagnosis.

This paper is a contribution to the bacteriological diagnosis of arthritis based on the results of such empirical therapeutic measures. It contains the records of twenty consecutive cases in private practice suffering from arthritis of various types, in all of which a tentative clinical diagnosis of streptococcal infection was made, and which were treated with vaccines of streptococci derived from different sources. They do not go to show that all cases of arthritis are due to streptococcal infection, nor is that the least likely, for the *B. tuberculosis*, gonococcus, and pneumococcus are all well known to infect joints, which indicates that joints are susceptible to a considerable variety of bacterial infection. If, however, therapeutic results can be accepted as a basis of bacteriological diagnosis, these cases indicate that steptococcal infection is frequently concerned in cases of chronic arthritis.

The cases were, in the majority of instances, of long standing, they had resisted general therapeutic measures, and no source of infection was clearly indicated. Effusion into joints was rare, and the fluid when removed by puncture was invariably sterile. Blood cultures were also sterile whenever investigated. For various reasons streptococcal infections were suspected, and the patients were accordingly treated with vaccines made from streptococci obtained either from the mouth, in cases of oral sepsis, from the urine, or from the faeces. The patients have, in most instances, remained in the charge of their own medical men, whose reports are here quoted, so that any prejudice on the part of the wrlter, and any suggestion to the patient arising out of the employment of a new doctor and a supposedly scientific method of treatment have been, as far as possible, excluded.

CASE 1.

Seen with Dr. Luff, under the care of Dr. Johnson, Richmond. A lady, aged 70. Arthritis of many years' duration; bedridden.

Possible Site of Infection.—Mouth; gums retracted.

Bacteriological Examination.—Blood culture, sterile; urine, sterile; faeces, *B. coli* and *Streptococcus faecalis*; gums, streptococcus, *Micrococcus catarrhalis*. Vaccine of *Streptococcus faecalis* prepared.

Inoculation followed immediately by subjective improvement. Duration of treatment six months. Dr. Johnson reports: When first inoculated, sallow, almost yellow, with the usual toxic stain of skin, and anaemic. Pains in all joints, notably shoulders, elbow, and knee. Finger-joints and knee-joints much swollen. Nights bad, unable to turn herself in bed, appetite *nil*, bowels constipated. Pulse 90 to 96. Now extremely well in herself, excellent colour, pink and clear. Pulse 70 to 76. Temperature normal. Great abeyance of pain, though every now and then a fair amount in hands (finger-joints) and knees. Anxious to try to walk; appetite excellent, bowels regular. Joints very little swollen, though considerable joint destruction and tendency of fingers to ulnar side.

CASE 2.

A lady of 60, seen with Dr. Luff, under the care of Dr. Christopherson, St. Leonards. Rheumatoid arthritis, duration six years (since menopause). Joints affected—cervical, shoulders, wrists, hands, knees, ankles.

Possible Focus of Infection.—Gums; teeth began to "dissolve" some years before arthritis was felt, many had been extracted, and of the few left the incisors were much worn away at the necks.

Bacteriological Examination.—Blood culture, sterile; urine, sterile; gums, streptococcus, tetrad, *Micrococcus catarrhalis*. Vaccine of streptococcus. Inoculated six months. Dr. Christopherson reported that he was unable to see any improvement. The patient ultimately died of abdominal neoplasm.

CASE 3.

A lady of 50, seen on the recommendation of Dr. Luff, under the care of Dr. Halley, of Fulham. Duration twenty-four years. Joints affected: nearly all joints of limbs, great disorganization of metacarpo-phalangeal joints of hands with forward dislocation.

Suspected Cause.—Septic absorption from intestine. Gums sound; no oral sepsis.

Bacteriological Examination.—Blood culture, sterile; urine, numerous diphtheroid bacilli; faeces, *B. coli* and *Streptococcus faecalis*. Vaccine of streptococcus; after six inoculations Dr. Halley reported she had less pain in joints, and was decidedly stronger, but the improvement was not maintained.

CASE 4.

Seen on the advice of Dr. Williams, Harrow. A lady aged 45. Arthritis affecting many joints, with effusion into wrists, and sometimes other joints. No evidence of bony change. Duration several years. Exciting cause unknown.

Possible Source of Infection.—Teeth, well cared for, but considerable retraction of gums.

Bacteriological Examination.—Fluid from wrist-joint, sterile; urine, coliform bacillus giving reactions of *B. acidi lactici*; faeces, coliform bacilli only; gums, *Streptococcus salivarius*. Vaccines: (1) *B. acidi lactici*, four inoculations given with little change; (2) after this, mouth streptococcus for about eight weeks; massage was employed at the same time. There was marked subjective improvement both in general health and in the joints, with decrease of pain and increase of power, and considerable decrease in swelling, though the joints were still liable to effusion.

CASE 5.

Seen on the advice of Dr. Luff, under the care of Dr. Fox-Symons, South Kensington. Gentleman, aged about 50. Had an attack of gout, followed by septic conditions of the throat, and some angina. After this had acute pains in various joints, with temperature up to 103°. Joints hot, swollen, and painful.

Bacteriological Examination.—Blood culture, sterile; urine, numerous diphtheroid organisms; faeces, *B. coli* and *Streptococcus faecalis*. Vaccine of latter. Two inoculations were given.

Dr. Fox-Symons reports that the temperature rose to nearly 102°; there was a general lighting up of pains all over the body. After an interval another dose was given; all acute symptoms recurred, and inoculations were discontinued. The patient had had inoculations of the stock vaccine previous to this, and probably an error was made in starting the autogenous vaccine with too large a dose.

CASE 6.

Seen on the recommendation of Dr. Luff; under the care of Dr. Murray, of Hornsey. A lady of about 60. Severe polyarthritis of sudden onset, six months' duration.

Possible Site of Infection.—Gums; much pyorrhoea, lower incisors loose. Patient refused to have efficient treatment for the mouth.

Bacteriological Examination.—Gums: Profuse and nearly pure streptococcus. Vaccine of same. Dr. Murray reports that after four or five injections the patient had derived no benefit, and refused further treatment.

CASE 7.

Under the care of Dr. Earle, Hyde Park. A lady of about 65. Arthritis two and a half years, following prolonged fatigue. Joints affected numerous, especially hands and knees. Much deformity of fingers, shortening of tendons, but no bony changes detected.

Possible Site of Infection.—Mouth; much gingivitis and pyorrhoea, which remained untreated.

Bacteriological Examination.—Mouth, streptococcus; urine, diphtheroid bacillus and streptococcus. Vaccine of streptococcus. Treatment about three months.

Dr. Earle reports that the treatment seemed to give some slight subjective relief at the time: no objective improvement.

CASE 8.

Lady of 30. Tonsillitis for many years, subject to acute attacks; recent acute attack followed by arthritis in knees, ankles, and arm joints.

Bacteriological Examination.—Throat: *Streptococcus brevis*. Vaccine of same. Inoculated six weeks. Made good recovery.

CASE 9.

Seen on the advice of Dr. Luff, under the care of Dr. Cathcart Bruce, Kensington. Lady of 28. Acute illness clinically resembling rheumatic fever several months before treatment began. Many joints involved. Condition had apparently become chronic. No oral sepsis.

Bacteriological Examination.—Blood culture, sterile; urine, sterile; vaginal discharge, diphtheroid bacilli; faeces, *Bacillus coli* and streptococcus. Vaccine of *Streptococcus faecalis*.

Dr. Bruce reports that after fourteen weeks' pain, with temperature ranging high during which many joints were affected enlarged and painful, the vaccine treatment was started. This had an almost immediate effect, and at the end of three months there was no sign left of the trouble, and no recurrence at the end of eighteen months.

CASE 10.

Seen on the recommendation of Dr. Luff, under the care of Dr. Earle, Hyde Park. Lady about 60. Arthritis of about two years' duration. Many joints affected, especially knees. No evidence of bony change. Teeth well cared for. Abscess of one tooth had affected the gums of some of those adjacent.

Bacteriological Examination.—Urine contained streptococcus. Vaccine of same.

Under treatment for several months. Great subjective improvement with occasional slight relapses.

CASE 11.

Lady aged 60. Seen on the advice of Dr. Luff, under the care of Dr. Schacht, Kensington. Arthritis of two or three years' duration following severe mental and physical strain; bedridden. Joints affected: Small joints of fingers, elbows, ankles, and other joints. No fluid, no bony change detected. Gums retracted.

Bacteriological Examination.—Blood culture, sterile; urine, sterile; faeces, *B. coli* only; gums, streptococcus. Vaccine of streptococcus.

Dr. Schacht reports that the patient's general condition gradually improved in the summer and autumn to a marked degree; was able to attend an "at home." Less nervous and irritable, and sleeping well; pain in shoulders and joints less;

wrists and finger-joints smaller and more mobile. Some months later there was a recurrence, and further inoculations were given. It is difficult to estimate the fluctuations, but "There is no doubt she is distinctly better again."

CASE 12.

Under the care of Dr. Earle. Lady aged 50. Chronic rheumatic pains in various joints. No oral sepsis.

Bacteriological Examination.—Urine, numerous diphtheroid organisms; faeces, *B. coli* and *Streptococcus faecalis*. Vaccine of streptococcus. Duration of treatment about six months.

Dr. Earle reports both subjective and objective improvement during and for some time after treatment. There has been a relapse since. On the whole the treatment seemed to do good.

CASE 13.

Seen on the advice of Dr. Luff; under the care of Dr. Wood, Bloomsbury. Lady aged about 50. Arthritis two years. Right knee, left wrist, many finger-joints affected; changes chiefly polyarticular; no evidence of bone affection. Slight gingivitis; no other obvious source of infection.

Bacteriological Examination.—Blood culture, sterile; urine, *B. coli*, staphylococcus; mouth, many organisms, chiefly coliform and *Micrococcus catarrhalis*; faeces, *B. coli* and *Streptococcus faecalis*. Vaccine of *Streptococcus faecalis*.

The patient went abroad and reported after about a month: "The treatment is doing me a lot of good, and I think when I have my teeth seen to I shall soon be able to walk as I used to."

CASE 14.

Seen on the advice of Dr. Luff. Gentleman aged 51. Joints affected: temporo-maxillary, shoulders, elbows, distal joints, three ulnar fingers, hips, knees; feet flat, hammer toes. A little fluid and slight grating in several joints, especially hips. Teeth few and bad; receding gums. Completely crippled. Five years previously had slight injury to a knee, followed by sudden hydrarthrosis. Had bath treatment and massage, which led to an attack of "rheumatic fever." In bed five months; joints began to swell. Progressive arthritis ever since. Distinctly worse after bath treatment. Had gonorrhoea fifteen years before, but no evidence of gonococcal infection could be obtained by autoinoculation experiment.

Bacteriological Examination.—Teeth, diphtheroid bacillus, tetrad; urethral discharge, diphtheroid bacillus; faeces, *B. coli* and streptococcus. Vaccine of gonococcus was tried without result. He has had inoculations of streptococcus vaccine for the last two and a half years. The disease is progressing, but the patient thinks he gets slight relief from the inoculations.

CASE 15.

Under the care of Dr. Tyson, Folkestone. Lady aged about 45. Arthritis, duration several years. Joints affected generally, especially hands. Enlargement of joints, interphalangeal joint left hallux destroyed, with hyperextension. Left temporo-maxillary joint sometimes affected.

Site of Infection.—Lower gums considerable swelling, no definite pyorrhoea.

Bacteriological Examination.—Urine and faeces similar streptococcus; mouth, *Micrococcus catarrhalis*, coliform bacillus. Vaccine of streptococcus.

Dr. Tyson reports: Inoculated two months, but "I cannot say that there were changes subjective or objective noticeable either for better or worse."

CASE 16.

Seen on the advice of Dr. Luff. Lady of about 50. Arthritis twenty years' duration. Sudden onset in left index finger; all joints affected since, varying in degree. Right knee much distended and stiff, hands deformed.

Possible Site of Infection.—Mouth, slight pyorrhoea.

Bacteriological Examination.—Synovial fluid in knee, sterile; gums, streptococcus. Vaccine of streptococcus. Inoculated three months; no improvement.

CASE 17.

Seen in consultation with Dr. Farquhar Buzzard, under the care of Dr. Payne, Torquay. Lady aged about 35. Joints affected, fingers, knees, ankles, and others. Slight limitation of movement. No bony change detected. Duration eighteen months. Teeth and gums sound and well cared for with the exception of an abscess at root of one tooth. Chronic vaginal discharge.

Bacteriological Examination.—Gums, *Streptococcus salivarius*; vaginal discharge, diphtheroid bacilli in pure culture; urine normal; faeces, *B. coli* and streptococcus. Vaccines of *Streptococcus faecalis* and *Streptococcus salivarius*. Under treatment nine months.

Dr. Payne reports the amount of pain very variable; sometimes quite free when at rest, but comes on with movement. Finger-joints smaller, wrists and ankles markedly improved. Knees and neck most troublesome. Still fluid in left knee. Shoulders better; pain chiefly felt in knees and neck. After the first two months in Torquay the *Streptococcus salivarius* vaccine was commenced; up to that time the joints and other symptoms were getting much worse. The chief improvement has taken place since very good Swedish massage was started three months ago.

CASE 18.

Under the care of Dr. Turner, Ryde. Lady aged 33. Duration two years; stated to have followed septic condition of mouth. Joints affected: Right wrist slightly swollen, right knee swollen, left elbow flexed; great loss of power in all limbs. Possible site of infection mouth; slight gingivitis.

Bacteriological Examination.—Synovial fluid from knee, sterile; mouth, *Streptococcus salivarius*; urine, sterile; faeces, *B. coli* and *Streptococcus faecalis*. Vaccine, *Streptococcus faecalis*.

Dr. Turner reports: Duration of treatment six months; during last months of treatment improvement has taken place in pain and swelling, which continued steadily until six months after discontinuance. Both pain and swelling have now disappeared, leaving nothing but ankylosis.

CASE 19.

Lady of about 60. Under the care of Dr. Male, Croydon. Joints affected, fingers; Heberden's nodes on fingers; synovial crackling right knee, thickening of synovial membrane left knee. Possible source of infection, rheumatic fever twenty-seven years before. History of endocarditis. Aching pains on and off ever since in legs and arms. Joints very recently affected.

Bacteriological Examination.—Urine, streptococcus. Vaccine of same.

Dr. Male reports that vaccine was injected for four months. Marked subjective improvement during treatment, but relapsed later towards the end of treatment. On the whole condition now is better than formerly. Does not complain of knee. Temperature has tendency to rise at night. Nervous symptoms predominate. Still has occasional bouts of rheumatism at times.

CASE 20.

A medical man. Seen on the advice of Dr. Luff. Acute arthritis of some months' duration. Double flat feet, especially on the right; severe pain in tarso-metatarsal joint; fusiform swellings of all finger-joints. Mouth sound, slight gingivitis only.

Bacteriological Examination.—Blood culture, sterile; urine, sterile; faeces, *Streptococcus faecalis*. Vaccine of latter. Duration of treatment, three months. Slight improvement, probably not referable to vaccine.

I wish here to record my thanks to the various gentlemen who have assisted me with these reports and for their permission to publish them.

These results may be analysed as follows. One case, No. 9, is cured. Six cases, Nos. 1, 4, 8, 10, 11, 18 are much improved. Six cases, Nos. 3, 7, 12, 13, 17, 19 have shown some improvement. Six cases, Nos. 2, 6, 14, 15, 16, 20 are unchanged. One case, No. 5, was much worse.

From the point of view of bacteriological diagnosis, the cases cured and much better afford strong evidence of streptococcal infection, and No. 5—the case in which there was marked increase in symptoms—points equally in the same direction. The six cases which were quite unchanged are evidence against such infection, and the improvement in the six cases described as slightly improved cannot be separated from accessory treatment such as the massage adopted in Case 17, or from the psychological influence inherent in any form of treatment which is new to the patient. It is, however, a reasonable conclusion from this series of cases that eight out of twenty unselected cases have given strong therapeutic evidence that their arthritis was due to infection by streptococci chiefly derived from some part of the alimentary tract.

THE Governments of Norway and of the Principality of Monaco have given their adhesion as from January 1st, 1913, to the arrangement signed in Rome on December 9th, 1907, by which the international office of public hygiene was created in Paris. The number of countries which now take part in the work is twenty-nine.

AT the last meeting of the Roentgen Congress, held at Berlin under the presidency of Dr. Immelmann, it was decided to establish a system of tours for the purpose of seeing radiographers in different places at work and studying their methods. A large number of heads of laboratories have already expressed their willingness to receive the members. The first tour is to take place from September 15th to 20th, when the visit will be made to Vienna. For the second tour the week before Whit-Sunday of next year has been suggested. A round of visits will then be paid to Bremen, Hamburg, Altona, Cologne, Bonn, Frankfort-on-the-Main, Nauheim, Erlangen, and Munich. A special subcommittee has been formed from the committee of the German Roentgen Society, consisting of Drs. Eberlein, Levy-Dorn, and Immelmann. Communications should be addressed to this subcommittee, Lutzowstrasse 72, Berlin.

SEQUEL OF A CASE OF CARDIOLYSIS.

BY

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In the British Medical Journal of December 14th, 1912, was published a case of cardiolysis.

A boy of 15, who appeared to be at the point of death from cardial failure, supposed to be secondary to adhesions of the pericardium to the heart muscle and to surrounding tissues and organs, was operated upon by Mr. Barling on June 17th. Every method of treatment had previously been tried but had failed to relieve him.

At the operation about 14 in. of ribs over the praecordial region were removed and adhesions to the sternum and ribs were broken down. Good results were almost instantaneous; four days later the pulse, which had always been from 100 to 120 per minute, fell to 60. Diastolic bruits which had been audible could no longer be heard, and the only systolic murmur audible was over the mitral orifice.

Three weeks later it was noted that, though his pulse was irregular, he was comfortable and much less cyanosed than formerly. His breathlessness had vanished, he was able to walk up and down stairs, oedema had disappeared from his legs, and the marked ascites was no longer existent. The improvement was quite remarkable, and continued until the end of October, when he gradually began to fail.

All the old symptoms reappeared, and, though he was treated continuously either in the General or the Jaffray Hospital, nothing could be done for him. Death occurred at the end of March. A very careful *post-mortem* examination was made for me by Dr. Parsons and Mr. Haycraft, and the result of their examination, for which I am greatly indebted to them, is as follows:

POST-MORTEM NOTES BY LEONARD G. PARSONS, M.D., AND J. B. HAYCRAFT, F.R.C.S.

External Appearances.—The body was very thin and wasted. The face was cyanosed. The abdomen was distended and discoloured, and there was some oedema of the legs, chiefly on the left side. Over the precordium there was a large depression and a semilunar scar where the ribs had been resected by surgical operation.

Thorax: Universal adhesions; many of the adhesions were oedematous, broke down easily, and looked fresh; others were dense and firm. The heart and pericardium were extremely large, measuring 6 by 5½ in., with marked recent and old adhesions to the chest wall, to the operation scar, and to the lungs. The pericardium is universally adherent to the heart, and can be separated in patches only, and that with the greatest difficulty. The heart cavities are considerably dilated. There is a slight thickening of the mitral cusps (some functional regurgitation). The other valves are quite normal in appearance. The heart muscle is quite pale and very flabby, and showed marked hypertrophy. Left ventricular wall ⅜ to 1 in. thickness. The pericardium is very adherent to the diaphragm, and there are marked adhesions around the inferior cava and round the superior vena cava and the venae innominatae. All these veins, together with the jugulars, were very distended with blood. The left internal jugular measured 1 in. in width. These veins were traced along their whole extent, and no constriction or stenosis was found, even where they were enveloped in fibrous tissue.* The left lung was considerably retracted. There was a fair amount of straw-coloured fluid in each pleural sac, and there were many adhesions. Both lungs showed marked oedema, and the lower lobe of the right lung was consolidated. The pulmonary veins throughout the lung seemed distended, and their walls showed up very distinctly; they did not appear to be distended.

Abdomen: On opening the abdomen there was an escape of a large amount of clear, yellowish-coloured fluid. The inferior vena cava was full of blood and markedly distended. The renal veins were in a similar condition. The stomach and duodenum were healthy. The intestines were normal.

Liver: There is some perihepatitis, and on section there is a definite, although small, increase in fibrous tissue. The liver on section shows a well-marked nutmeg character. It is free from adhesions to other organs and to the diaphragm.

Pancreas: Healthy.

Kidneys: Right, 3¾ oz.; left, 4 oz. They showed some congestion.

The *spleen* was enlarged, firm in consistence, of a dark red colour, and congested and also showed a mild degree of perisplenitis.

The *suprarenals* were enlarged and of a purplish colour.

Microscopical Examination.

Liver: The capsule showed some degree of thickening, and there was a slight increase of fibrous tissue round the portal tracts with some spread into the lobules. In a few places there was some small-celled infiltration, and the liver columns were separated by oedema and congestion.

The *kidneys* showed some degeneration of cells of the convoluted tubules, and some early fibrous change affecting the vessels and glomeruli.

Spleen: Definite fibrosis of capsule, trabeculae, and vessels.

The *suprarenals* showed patches of small-celled infiltration, and the medulla was of more open structure (? oedema) than normal.

So far as I know this is the first time the sequel of a case of cardiolysis has been recorded, and the results are not only very interesting but may have also a very important bearing upon treatment. In addition they do, to a certain extent, justify the opinions I hazarded as to the causation of symptoms when the pericardium is adherent to structures in the mediastinum.

They show, moreover, the accuracy of the observations of Sir Thomas Barlow, who had noted the dilatation of the jugulars in similar cases, and of Professor Keith, who suggested that the symptoms were largely due to the posterior adhesion. To both of these gentlemen I am greatly indebted for their letters and their interest in my case. They justify, I think, my guess that the ascites and the cyanosis might be due to the nipping of the inferior and superior cavae respectively, for though no stenosis of the former was found, it is expressly stated that the smallest calibre of the vein was found in its passage through the diaphragm.

The disappearance of practically all the bruits which had been audible over the whole cardiac area was remarkable, and justified the opinion that they were due not to endocardial changes but to distortion of the relations of the valves and the heart cavities.

What the bearing of the *post-mortem* evidence on future surgical methods may be I cannot say, and perhaps it would be unwise to generalize from a single case, but it is difficult not to think that, if there are evidences of pathological adhesions to the diaphragm, it would be wise to try to divide some of them. It is, I think, material to this point to remark that the operation has been always done in cases in which there is no possibility of improvement by means other than surgical, and that if death results, as, so far as published cases show, it never has resulted, from operation, it will anticipate by only a few days or weeks death with all the distressing symptoms of breathlessness, sleeplessness, and mental misery.

There can be no question that in my case the operation was worth doing, for it gave the patient a good six months of pleasant life and comfort before the recurrence of distressing symptoms began.

* The inferior vena cava showed the smallest calibre when passing through the diaphragm. There was no stenosis beyond that point, and it opened into the auricle by a very large mouth. The Eustachian valve was very prominent, and the right muscle very dilated.

AN ANALYSIS OF A SERIES OF CASES OF HYPERTENSION AND HYPOTENSION TREATED AT VITTEL.

BY

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I look upon the sphygmomanometer as just as important an instrument in the diagnosis and treatment of chronic ailments and diseases as is the thermometer in acute ones. The interpretation of blood-pressure readings, however, is a far more complicated problem than is that of making one's deductions from the varying height of the thermometric column.

My first experiences of the use of instruments for measuring the hydraulic phenomena of circulation were those early investigations of Dr. George Oliver. From that time onwards I employed at irregular spells one or another of the numerous instruments for measuring arterial tension. In 1903 I was driven by a very serious attack of cyclic synovitis for treatment at Vittel, where I entirely recovered, and since 1904 have reversed my condition from patient to physician at that spa. During the last nine seasons, therefore, a large number of patients have passed through my hands.

At about this time—1904—I realized that a large proportion of ailments attributed to varied and multiple causes could be grouped together as due to different forms of chronic toxaemia. The writings of Huchard and others were directing attention to the importance of hypertension as being most frequently the preliminary phenomenon that eventually led up to "heart disease." They furthermore assigned to most hypertension and eventual arterio-sclerosis a toxi-alimentary origin. Their teaching had a marked influence upon our ideas of the whole question, and did much to modify our views of treatment. I was much struck by these writings, and my old interests in blood pressure were again thoroughly revived, all the more so because Huchard had chosen Vittel as being the ideal place for the treatment of hypertension.

Two or three years' experience convinced me, however, that although a toxi-alimentary origin formed a large proportion of predisposing causes, there were also others at work, and that not infrequently several causes were combined. In fact, I now think that there are many conditions which favour this ailment, some of which we do not know, while of others we have but the faintest inkling.

I have chosen at random some 456 cases of all kinds which have resorted to Vittel for treatment, the only conditions I have observed in the selection of them being that I was in possession of full records of each case, consisting of two complete quantitative analyses of the urine made under my supervision in my own laboratory both before and after the cure, and of the determinations of blood pressure, capillary reflux, pulse, weight, etc., taken before, during, and after the cure.

Normal Blood Pressure.

For the moment I do not propose to touch upon the arterial tension of children, of which I know little, but upon which some interesting researches have lately been published. Limiting the discussion, therefore, to adults, we are still met by a number of difficult problems. I have further circumscribed this study to maximum or systolic pressure only. The minimum or so-called diastolic pressure is still too problematical, and, although in most of these cases minimum pressures are recorded, yet I am so dissatisfied with the uncertainties of the readings that I postpone drawing conclusions therefrom to a later date. Most of the pressures here quoted were those recorded by a mercurial manometer. A large proportion were taken by my secretary, who has no medical training, and therefore no theoretical ideas by which to be influenced, but has great technical skill, and a large number were confirmed afterwards by myself.

In giving my experiences with Pachon's oscillometer[1] in a cursory way, I stated in outline only an empirical method which I have adopted, fixing upon average normal blood pressure, but with the desire to limit my letter I did not give collateral details and reservations. I here repeat the method: For every year of age after 15 I allow 1 mm. Hg, and add 100 to the number. Thus a person of 15 years of age should have 115 mm., one of 35 years 135 mm., one of 60 years 160 mm., etc.

The first qualification I would make to this is that these figures represent a *safe maximum*. The second is that for persons over 60 years of age there should not be a uniform rise in the systolic thrust, as somewhere about this time a markedly less strenuous mode of living is followed. and also the heart muscles begin to show the first indications of senile enfeeblement. As a third qualification I would say that, as the general muscles, glands, nerves, etc., vary in different people, so, no doubt, their heart, blood vessels, capillaries, etc., also vary, and even vary amongst themselves. A powerful heart with weak arteries and perhaps inefficient kidneys will give us a normal average blood pressure for such a person very different from that which a reverse condition would register. Many physicians know of people with permanently high blood pressures who have lived for years in good health, whilst others with relatively low blood pressure have died of apoplectic haemorrhages or failing hearts.

Analysis of Cases.

These 456 patients include persons resorting to the cure for all sorts of ailments, but chiefly those who owed their ill health to some form of chronic toxaemia. The largest number are those of the "gouty" nature—visceral, articular, and nervous. Next come those with the dominant phenomena of hypertension and heart troubles. After these follow albuminurics and other renal and vesical sufferers, while lastly we may place glycosurics, hepatics, etc. As may be observed, these are mostly ailments in which we expect to find some alterations in blood pressure.

Age.

From this total of 456 persons, then, we get an average age of 53.78 years—which will, no doubt, be inferior to the truth, since a considerable proportion were ladies—and an average blood pressure of 151 mm. Hg, evidently a far higher maximum blood pressure than we should obtain from the same number of persons of the same ages not requiring a cure. The average blood pressure on departure was 138 mm., which affords us a mean diminution indiscriminately for each person of 13 mm. But of the 456 patients there were 75 whose blood pressure rose and 36 with no variation. This leaves us 345, or three-fourths of the total, whose blood pressure went down in consequence of the cure. The calculated average age of these 345 was 54.1, while their blood pressure was 156 mm. before and 136 mm. after the cure, giving an individual mean reduction of 20 mm.—a striking demonstration of the good effects of the Vittel treatment.

The next thing to select was all those whose blood pressure on arrival was over 160 mm., my maximum safe limit for any age. These attained the number of 154, the larger proportion of whom were sent to Vittel for the purpose of reducing their hypertension. The average age of these was 59.75 years, with a mean tension of 182 mm. before and 159 mm., or a reduction of 23 mm., after the cure.

I then proceeded to make a selection of those over 60 years of age. Taking their averages once more I got 66 years, with blood pressure at 161 mm. before and 146 mm. after, or a reduction of 15 mm.—that is a gain of 14 mm. below the maximum safe normal for their ages.

It will be observed that those above 60 years of age had on arrival an average lower tension than the others of all ages who had a blood pressure above 160 mm. This would lead us to infer that in these younger patients we had further special causes for increased arterial degeneration, such as syphilis, nephritis, adrenal excess, capillary spasm, higher blood-viscosity, etc., than in those over 60 years of age, where we have to look more to the true senile wear and tear of the arteries. In the group of those over 60 years no doubt a less strenuous mode of living would keep the heart at a lower level of activity, and our average may be vitiated by a certain number of failing heart muscles.

Passing now to the consideration of the 36 patients whose blood pressure remained unaltered during the cure, we obtain a mean age of 55 years and blood pressure of 144 mm., which, I think, will give us an absolute normal for persons of their age, and therefore it is to be presumed that as no reduction was necessary in such cases the cure did not act in this direction.

Effect of Vittel Treatment on Abnormal Tension.

In the last group of the 456 we have 75 whose blood pressure was raised during the cure, their mean age being 51.6 years and their blood pressure before the cure 131 mm. and after 142 mm., or an augmentation of 11 mm. It may be noticed how very near were the final readings of these hypotensionists to the normal blood pressure of those who remained unaltered during the cure—that is, 142 and 144 mm. Obviously, 131 mm. is a decidedly low blood pressure for people averaging 51.6 years. If, however, we examine individually this group of 75 persons, we find many of them with blood pressure below or near 100 mm. In the statistics, however, the results are marred by a certain number whose blood pressure was fairly high and rose during the cure. Why this increase took place I am unable to say in some cases, but in others, as seen by their history and the analyses of their urine, we have to deal with hypertensionists from chronic nephritis. In these patients their kidneys are just able to perform the ordinary daily work, but when the renal structure has to deal with the large extra amount of fluid,

the actual volume of blood is temporarily increased. If one is able to watch these cases for several days after the cure, one may see that several of them come down finally to below the blood pressure they had on their arrival, and show permanent improvement. One well-known man illustrated this admirably. He had had blackwater fever four times. During the cure his blood pressure went up somewhat, but finally came down with a considerable margin to the good, and marked improvement in health. In these cases we ought to be allowed much longer for the cure, in order that we may push water-drinking so much less in proportion. All practitioners know, however, the meanness of patients in the question of time given to any course of treatment.

If we get a prolonged spell of cold and damp weather such as we had last year (1912) blood pressure often goes up, and then drops when warm weather comes, and the capillary reflux oscillates in accordance, showing that the hypertension is due to capillary spasm. The mechanism of this is, I think, fairly clear. I should like to know if any other physician has observed this fact. At any rate, it points to the great advantage of dry, warm weather for hypertensionists in general. I have frequently observed this favourable influence in such cases that come to me in my winter practice on the Riviera.

I am often asked by my medical colleagues whether, over and above the relief of the symptoms that usually accompany hypertension, the reduction or increase of blood pressure towards normal is permanent. The reply to this question must be qualified. I have no hesitation in saying that in most cases the improvement is not evanescent. On the other hand, if no intermediate care as to mode of living is taken, or no lixiviating treatment followed from time to time, the blood pressure again gradually rises. This rise, however, is far and away more gradual than after treatment by drugs, most of which I have used with very indifferent success, and which, I am convinced, are more dangerous—excepting as a temporary measure—than the hypertension which they are intended to reduce. Drug treatment in such cases is neither more nor less than superposing or replacing one toxaemia by another. In consequence of the length of this study, I propose to postpone to a future paper an investigation on these lines of a number of annual *habitués* to Vittel, who well illustrate this point.

Classification of Patients.

Experience has taught me to classify persons suffering from increased blood pressure into three classes. In the first group are those persons "who are never still"—I mean those who work, worry, play, etc., very hard. Their heart is always in an overstrained and excited condition, and pumps too hard. These may or may not have a minimum arterial-capillary spasm from their vessels carrying and being fed by a toxaemic blood in ratio to the nature of their diet and the efficiency of their excretory organs. In the second group are those where a toxaemic blood, setting up capillary and arterial spasm, has persisted until the arteries have advanced more or less towards permanent reduction in calibre by arterio-sclerotic changes, just as a long restrained limb becomes permanently a rigid one. The earlier these cases are treated, the greater and easier is the fall of blood pressure coincident with an increase in capillary permeability.

If we measure the capillary reflux in these cases we often find it fall during the cure from five to ten or more seconds to three or even less, and simultaneously the systolic blood pressure will diminish 30 to 50 mm., the heart regains its exhausted forces, the aortic clang is no longer audible, and cold extremities are replaced by warm ones. Even in the last stages of arterio-sclerotic disease, with a dilated and failing heart and fallen blood pressure I have seen great improvement; but, of course, here the cure must be very gentle, carefully watched, and prolonged over several weeks.

In taking the averages of our records of capillary reflux we obtained an average of 3.7 seconds before the cure and 3.5 seconds after. Taking 3 seconds as the average normal, it will be observed that all the patients had slow capillary circulation, showing that the average high tension was to no inconsiderable extent due to capillary spasm and high blood viscosity.

It is interesting, though to a less extent, to investigate the total effect on the pulse, which often increases as blood pressure is reduced in ordinary conditions. This occurs when the pressure descends from normal or above it to below normal, the heart making an effort to keep up circulation, and so equalize nutrition in distant parts of the organism. Our pulse records give us a mean of 75 per minute on arrival and 73 on departure. Although the mean reduction is only two, yet the approach to average normal is marked. But what is of greater interest is that, notwithstanding the marked reduction in the blood pressure of these patients, not only did no increase of pulse-rate occur, but on the contrary a slight reduction, demonstrating that the improvement of the hydraulics of the circulation was a real and substantial one.

In the third group we must place the renal cases. Here great complexity arises. Complete twenty-four hour urine analyses help us a good deal, but are often deceptive as to the amount or advance of the kidney lesion. Many of these cases come year after year to wash their blood and tissues, clear their urine of casts, diminish or get rid of their albumen, if they have any, and to reduce their arterial tension. Some cases get quite well, and remain so for years; others wind up their clock of life for some months; but, year by year, as they return, a morbid, degenerative action, although greatly reduced in the speed of its progress, eventually leads to a fatal termination. In two of the cases recorded a patient and his wife came each winter to Beaulieu and each summer to Vittel. They were both cases of chronic nephritis. The wife, step by step, for three consecutive seasons at Vittel, quite recovered her health, but her husband, though he improved considerably each season, yet each year on his arrival had lost during the eleven months' interval more than he had gained during his previous cure. Eventually, after a number of retinal and other small haemorrhages, he died in London of uraemia. This man, two seasons before his death, arrived at Vittel with the phenomenal blood pressure of 290 mm., which fell during the first five days of the cure to 245 mm., and at the end of it to 215 mm. I have selected these two as illustrations, as they lived inseparably for many years, and therefore were exposed to identical surroundings, and ate the same food, etc.

Another question I am often asked is whether the reduction of hypertension in old people is brought about by a cure at Vittel. The answer to this is already given in the statistics for those over 60 years of age, as also for those with blood pressure over 160 mm. on arrival. Both results—the former showing a reduction after the cure of 17 mm. as the average per head, and the latter one of 23 mm.—are speaking enough. No more striking demonstration could be offered, I think, of the remarkably practical, positive, and fairly permanent results of proper treatment by a non-chloride bearing, slightly hypotonic water, in which we introduce into the organism no substance that does not enter into the composition of the human frame to a greater or less extent, a method of treatment incomparably superior to any employment of drugs.

REFERENCE.
[1] BRITISH MEDICAL JOURNAL, January 13th, 1912.

THE Principal Medical Officer (Dr. Sanson), in his annual report for 1911, states that the estimated population of the Federated Malay States was 1,045,947, being an increase of 44,690 over the number for 1910. The birth-rate was 19.41 per 1,000 of the estimated population—a slight decrease on the rate for 1910, which was 21.39. The death-rate for 1911 was 37.03, as against 32.16 for 1910. Malaria caused 45.02 per cent., and dysentery and diarrhoea 19 per cent. of the total deaths. The infantile mortality was 170 per 1,000. There are forty hospitals and nine gaol hospitals, and in these 97,162 in-patients were treated during the year, and 232,506 out-patients. An Advisory Board has been appointed (1) to collect and distribute information regarding malaria; (2) to advise how anti-malarial measures could be most advantageously carried out in each district; (3) to encourage and advise local bodies in their efforts towards extermination of mosquitos; and (4) draw up appropriate legislative measures. There were 6,042 cases of beri-beri treated in the hospitals, with 695 deaths. The Government has had under consideration several proposals for preventing or limiting the use of an unsafe rice and encouraging the use of a safe rice.

X RAYS IN THE TREATMENT OF DISEASES OF THE PALM.

By HALDIN DAVIS, M.R.C.P., F.R.C.S.,

ASSISTANT PHYSICIAN TO THE HOSPITAL FOR DISEASES OF THE SKIN, BLACKFRIARS.

VERY soon after their discovery the therapeutic value of *x* rays in the treatment of skin diseases became manifest, and a proper knowledge of their powers has become increasingly necessary to the dermatologist. As is well known, they are extremely valuable in the treatment of rodent ulcer, lupus, mycosis fungoides, and other serious diseases of the skin, and in this country, at all events, the attention of the profession seems to have been concentrated on this aspect of their utility to the exclusion of the advantages they possess in dealing with such conditions as chronic eczema and psoriasis. There are very few references to this branch of the subject to be found in English; the earliest I have been able to find is a paper by Biddle.[1] Other earlier but Continental papers are by Albers-Schonberg[2] and Hahn, who published a series of 35 cases with uniformly good results. Wetterer[3] in 1908 stated that he had treated several hundred cases of chronic eczema with *x* rays which without exception did well. In America, Williams[4] in 1904 published several cases of eczema cured with the rays.

The best account of the treatment of eczema with *x* rays will, however, be found in a book recently written by Dr. Schultz,[5] which has been translated into English. The whole subject of *x*-ray therapy is excellently and impartially treated in this work, and it is a great misfortune to the science and art of radiology that Dr. Schultz has recently died. Very little has been published in this country on the treatment of eczema with *x* rays, although as early as 1899 Thurstan Holland published in this JOURNAL a case of eczema of the hand cured in four sittings with *x* rays. This is almost the only paper on this branch of radio-therapeutics which has been published in this country. In *Light and X-Ray Treatment*, by Sir Malcolm Morris and S. E. Dore, the question is dismissed in about three lines, and about the same space is devoted to it in the last edition of the same authors' textbook and also in that of Dr. Sequeira.

Perhaps more attention has been given to the radio-therapeutics of psoriasis, no doubt because that complaint is more often refractory to the older methods of treatment. Still there are many cases of chronic eczema persisting over long periods which may almost without exception be cured with *x* rays. Among the most obstinate forms, often quite uninfluenced by the ordinary treatment with ointments and lotions, are those which affect the palms of the hands. In these cases the skin of the palms is thickened, the horny layer is much changed and exhibits both the phenomena of hyperkeratosis and parakeratosis, and as a consequence the natural lines of the palm are much deepened, and often become the sites of painful and troublesome cracks and fissures. The patients complain as a rule of great irritation, which is occasionally sufficiently severe to disturb their sleep. Psoriasis of the palm does not, perhaps, cause the patient so much discomfort, but it is equally refractory to treatment. It consists of sharply defined areas of scaling, sometimes accompanied by changes in the nails, but by no means always associated with typical psoriatic lesions on other parts of the body. In the absence of psoriasis on other parts of the body the diagnosis may be very difficult. I have lately had the opportunity of treating some cases falling into the above categories, and in view of the fact that so little attention has been directed to this method of treatment I think they are worthy of publication.

CASE I.—*Palmar Eczema.*

G. G., a gentleman aged about 48, a patient of Dr. Stocker. He had suffered for two years from typical palmar eczema with well-marked fissures and much hyperkeratosis. The subjective symptoms were not very severe—in fact, he was able to play golf in comfort when wearing gloves, but he complained of the unsightliness of the condition and the constant necessity for using lubricant applications to prevent the hands becoming stiff. He had used various plasters and ointments without much relief. The whole of the patient's skin was somewhat dry and he had a poor circulation, as was shown by the prominence of the venous network on his limbs. The eczema had been supposed to be gouty, although there was no other sign of that condition, and otherwise he enjoyed excellent health. The examination of the urine disclosed nothing abnormal.

He was treated with *x* rays in the following manner: On September 2nd the left hand was exposed for seven minutes to a tube of equivalent spark-gap of 4 in. with 5 milliampères of current passing through it, while the right hand was exposed for five minutes with the current gradually increasing from 0 to 1 milliampère. The distance of the anticathode from the skin was 8 in., and from measurements previously made with the same tube the whole dose was calculated to be about half a pastille dose.

On September 10th both hands were somewhat improved, especially the right. Each hand was given another half-pastille dose. On September 17th the hands were still more improved. Each palm received only a very small dose—about one-third of a pastille. On September 24th the palms were practically well, but some new cracks had appeared on the left thenar eminence, and this part, which had not previously been exposed to the rays, received half a pastille dose. On October 1st and on October 8th the left thenar eminence received about one-third of a pastille, and since then the patient has been quite well.

CASE II.—*Palmar Eczema.*

A lady, aged 68, who had definite articular gout, had suffered from fissured eczema of the palms for thirty years. When first seen on December 12th she had, in addition, patches of vesicular weeping eczema on the backs of the hands and also on the dorsal aspect of the the third finger of the left hand just underneath her wedding-ring. She also had a patch of irritable erythema on the forehead.

The backs of the hands and the forehead were treated with zinc and ichthyol for a month and got quite well. On January 9th the palms were first *x*-rayed. They were given a dose of about two-thirds of a pastille each, and the same dose was repeated on January 23rd. On February 6th, except for being a little dry, the palms were quite well, there were no more fissures, and the patient said that the irritation had practically disappeared, so that she was able to sleep better than for many years. She said, however, there was still a little itching on the backs of the hands, and they therefore received half a pastille dose.

CASE III.—*Palmar Psoriasis.*

M. H., a woman aged 58, first came under my care at the Hospital for Diseases of the Skin, Blackfriars, on May 17th, 1912. She exhibited on the palms of both hands large peeling areas with well-defined margins. The natural lines were deeply cut, and in some places fissures had developed. The diagnosis of psoriasis was made because the condition was strictly confined to the palms, and there was not, as is usually the case in eczema, any inflammatory condition of the dorsal aspects of the phalanges. The nails, however, were, as is common in psoriasis, slightly pitted. The patient had suffered from this condition for eighteen months, although she had had much treatment.

She was treated at the Skin Hospital at first with tar and salicylic acid ointment, and for the first month made good progress, but afterwards relapsed. Various applications were tried without much success. Ultimately, however, on September 20th, 1912, she had a full pastille dose of *x* rays to both palms. On October 4th they were already much better, and on October 25th they were quite well, the first time for two years. Since then they have remained well.

As has been stated above, *x* rays are extremely useful in treating chronic eczema in most situations, but they are especially advantageous in the case of lesions situated upon the hands, because it is obviously very inconvenient to keep those almost indispensable appendages continually swathed in bandages, as is necessary if treatment with ointments is to have a fair chance of success.

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[1] *American Quarterly Journal of Roentgenology*, vol. 1906-1907. [2] *Fortschritte an der Gebiete der Röntgenstrahlungen*, 1898. [3] *Handbuch der Röntgentherapie.* [4] *Roentgen Rays in Medicine and Surgery.* [5] *X Rays in the Treatment of Skin Diseases.*

THE Maryland University School of Medicine has instituted a course of tropical medicine, under the direction of Surgeon J. A. Nydegger, of the United States Public Health Service, with the assistance of Dr. C. W. Stiles and other members of the same service.

PROFESSOR SHERIDAN DELÉPINE, in a paper on post-graduate teaching in tuberculosis, published recently in the *British Journal of Tuberculosis*, urges that tuberculosis officers selected by authorities should be allowed after their appointment to devote a part of the first year to the study of the special pathological, administrative, and clinical work to which they will have to devote themselves in the service of the public. This proposal seems to be on all-fours with the regulations which already exist with respect to the medical services of the army and navy.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

CHICKEN-POX DURING INTRAUTERINE LIFE.

I have been unable to find in the literature any account of a case resembling the following:

I was called to see an infant some four hours after delivery. The child was apparently healthy, except for the presence of a rash distributed generally, but more marked on the scalp, face, and trunk. The palms of the hands and soles of the feet were also affected, as was also the mucous membrane of the mouth. In character the eruption was identical with that which obtains on or about the fourth day in varicella, that is, macules, vesicles, vesicles with turbid fluid contents, pustules, ruptured pustules, and scabs, were all present, indicating that the eruption must have begun whilst the infant was still unborn. There were no further signs of disease, and the eruption disappeared in a few days without a further crop appearing.

The mother of the child was apparently unaffected with the disease, but in the same house there had been cases of chicken-pox fourteen days previously, disinfection of the room having taken place, however, in the interval between that time and the birth of the child. The history of the illness of the other children was as follows: About twenty-five days before the confinement one child was removed to the fever hospital with measles and broncho-pneumonia. Four days later a second child developed measles and chicken-pox, and a third followed with measles, and this last child developed chicken-pox in the fever hospital, incubation period having begun at home. In the interval between the removal of the last child and the birth of the infant—that is, fourteen days—no illness could be traced in the house, neither could any contact with infectious disease be discovered, except for the fact that the mother visited her children at the fever hospital.

Hirst, in his *Textbook of Obstetrics*, gives an account of various infectious diseases occurring in the fetus, and the following remarks are extracted in the main from that work. At first it was thought that the transmission of organisms into the placenta from the maternal blood was impossible, the ground for such belief lying in the results of experimental inoculation of animals with the tubercle bacillus, with the anthrax bacillus, and with pathogenic organisms. In the fetuses of animals injected with these micro-organisms, although the latter were found in the maternal blood in large numbers, none were ever discovered in that of the fetuses. Later, however, the observers responsible for the foregoing conclusions, as a result of further experiment, stated that micro-organisms and colouring matters, when injected into the maternal blood, could be discovered in that of the fetus. In a human fetus removed by Caesarean section from its mother, dead of septicaemia, numbers of micro-organisms were found in the blood.

Koubasoff[1] stated that he had always found anthrax bacilli in the blood of fetuses born of mothers infected with the disease except in one instance, where, in a twin birth, one fetus was macerated and its placenta the site of haemorrhages, the other being healthy and its placenta unaffected. In the blood of the former organisms were not isolated, whereas in that of the latter they were numerous; this seems to suggest that a pathological condition of the placenta is necessary to prevent the transmission of organisms, and is one which alone offers resistance to microbic invasion of the fetal blood.

The list of infectious diseases affecting the fetus *in utero* is lengthy. Variola is a well recognized entity. A child may be born covered with pustules or even scars, and the mother may or may not be affected with the disease. As a general rule, however, the fetus of a small-pox patient is born unaffected. The mother has in some cases been vaccinated during pregnancy in order to see if immunity may be produced in the fetus; a positive result occasionally obtains, but the reverse is the rule.

McDonald[2] has reported intrauterine measles, and scarlatina has been noted in many cases. Hirst quotes a case reported by Leale[3] in which a child was born with a "strawberry" tongue and a red coloration of the skin, the latter remaining for seven days, and on the tenth day albuminuria and oedema appeared.

Other diseases are also reported in the new-born fetus. A child has been born with consolidation of its lungs, the mother herself being affected with pneumonia. The organisms of septicaemia, cholera, malaria, typhoid, and erysipelas are reported to have been found in the blood of the new-born fetus.

All these facts are interesting in the light of the above case, which was clinically a definite but mild attack of varicella, as evidenced both by the eruption and the history of illness in the house, together with a satisfactory incubation period, although disinfection had taken place. If, then, small-pox and other infectious diseases may and do occur in the fetus, their origin taking place *in utero*, there is no reason why, in virtue of this case, chicken-pox may not be added to the list.

I must express my indebtedness to Dr. J. Prescot Hedley for advice and permission to publish this case.

Darlington. F. C. Pridham, M.R.C.S., L.R.C.P.

[1] *Medical News*, August 30th, 1884.
[2] *Edin. Med. Journ.*, 1884–1885, p. 699.
[3] *Medical News*, 1884, p. 636.

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

WOLVERHAMPTON AND SOUTH STAFFORDSHIRE GENERAL HOSPITAL.

RUPTURED SPLEEN IN A BOY: SPLENECTOMY: RECOVERY.

(By Howard H. C. Dent, M.B., F.R.C.S., L.R.C.P., Honorary Surgeon to the Hospital.)

On January 3rd, 1913, a boy, aged 14, was admitted under my care. He had been walking along a pit "way" without his light when he was run into by a tub coming towards him and thrown violently against a "prop." He felt a blow in his abdomen, suffered great pain internally, and vomited.

When I saw him he was blanched, very restless, and had great pain and distension of the abdomen. The urine contained blood, and he had bruises over his left shoulder and left ribs. The temperature was 97° F., the pulse was 108 and increasing in rate, and the respirations 28.

Internal haemorrhage was diagnosed, and the abdomen was opened in the middle line. It was found full of blood. The bleeding came from the splenic region. In order to gain more room a transverse incision was made across the left rectus. With considerable difficulty the spleen was pulled up for examination, and was then found badly crushed and lacerated posteriorly. I did not think it possible to suture the tears, and therefore decided that the safest course was to remove the organ. Clamps were put on the vessels close to the spleen and the latter cut away. The vessels were then tied with difficulty, owing to the depth, the shortness of the pedicle, and the difficulty of pulling the latter into the wound. It was also necessary to take care not to include any portion of the pancreas. After the ligatures had been tied there was still some small amount of oozing, and as the boy's condition demanded speed, the region was packed with gauze, the end of which was brought out at the lower angle of the transverse wound. During the operation 2 pints of saline solution were put into the median basilic vein.

The after-treatment consisted of continuous salines per rectum, pituitrin every four hours, and morphine hypodermically, as there was great restlessness. The morphine had to be used for four days. After the operation there was no further haematuria. During the next week the temperature ranged from 98.4° F. to 100.5° F., the pulse from 100 to 120, and the respirations from 30 to 40. The gauze was removed on the third day.

On January 12th—nine days after the operation—the temperature went up to 102° F., and kept at 101° for the next three or four days. The respirations varied from 40 to 46; the pulse was 120. Signs of fluid were found on the left side of the chest, the side that was bruised; 10 oz. of bile-stained fluid were withdrawn by aspiration, and the temperature, pulse, and respirations rapidly improved, and the signs of fluid disappeared. The boy

was allowed up on January 30th, and on February 15th was only waiting for an abdominal belt before discharge. He was very fit and well. He had been taking a mixture since February 1st containing liq. arsenicalis and ferri et ammon. cit. An examination of the blood at this stage by Dr. Rattray, the Resident Medical Officer of the hospital, gave the following result:

Haemoglobin	80%
Red corpuscles	5,066,000
White corpuscles	9,600
The latter consisted of:	
Polymorphs	22%
Large lymphocytes	13%
Small lymphocytes	64%
Eosinophiles	1%

The lymphocytes being mainly of transitional type—that is, with large numbers of basophile granules and kidney-shaped nucleus.

This boy came to my out-patients on March 3rd, 1913, feeling remarkably fit and well. A blood film was taken, and Dr. Gordon Ward, who kindly examined it for me, reports as follows:

"There is slight eosinophilia and marked lymphocytosis, as is commonly found after splenectomy.

"Slight changes in the red cells of little significance, and commonly found in children.

"Increase in the platelets of doubtful significance."

Differential Leucocyte Count.

Polymorphs	41.2 %	48.0 %
Eosinophiles	3.8 %	
Mast cells	0.4 %	
Transitional leucocytes	2.6 %	
Small mononuclears	51.0 %	52.0 %
Large mononuclears	1.0 %	
Anisocytosis	Increased.	

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

STAFFORDSHIRE BRANCH.

THE third general meeting of the session of the Branch was held at Wolverhampton on April 24th, when the chair was taken by the President, Mr. E. C. STACK, F.R.C.S.I.

Mr. E. DEANESLY showed the following patients: (1) *Two Cases of Facio-hypoglossal Nerve Anastomosis for Facial Paralysis.*—The first, now a girl of 14, was admitted nine years ago with facial paralysis on one side and double mastoid suppuration. Radical mastoid operation was performed on the paralysed side, but two months later the facial paralysis was still complete. The facial nerve was therefore exposed as it emerged from the stylo-mastoid foramen and the hypoglossal nerve at the hyoglossal border. The latter was divided, turned back, and anastomosed with fine silk into a longitudinal slit in the undivided facial nerve. The second case, a girl of 16, underwent a similar operation two years ago on account of facial paralysis following a radical mastoid operation. In this case both nerves were divided, and the distal end of the facial nerve anastomosed directly to the central end of the hypoglossal. Both cases now showed identical results. In repose the face showed no difference in the two sides; there was no flaccidity on the affected side or overaction on the opposite side. A smile, however, at once showed a marked difference, the mouth being drawn strongly towards the unaffected side. On making a strong voluntary effort to frown and screw up the eyes, the brow muscles, the orbicularis, and the muscles of the angle of the mouth all contracted visibly, though less strongly than on the opposite side. Voluntary action of the affected muscles was, however, much stronger when associated with voluntary movement of the tongue, for when the latter was protruded and withdrawn the action of all the muscles on the affected side was almost equal to that on the sound side. The half of the tongue on the side of the anastomosis was completely paralysed and wasted. (2) *Two Cases of Paralysis of the Arm from Injury of the Brachial Plexus at Birth.*—The first, a child of 8 months, which was awaiting operation, showed the ordinary type of birth palsy described by Duchenne—namely, paralysis of the deltoid, spinati, biceps, brachialis anticus, and supinators of the radius. The arm hung helplessly by the side without power to flex the elbow or perform any shoulder movements except adduction (pectoral muscles) and slight elevation of the scapula (serratus). The second case was in a similar condition on its admission to hospital seven years ago at the age of 10 months. The site of the nerve injury was indicated by a cicatricial ball at the junction of the fifth and sixth cervical nerves to form the highest primary cord of the brachial plexus. This node was excised and the divided ends of the cord reunited with fine silk. The affected muscles responded to faradic stimulation of the divided nerves. Recovery was now practically perfect, save for slightly less power of supination on the affected side. The arm could be raised above the head, and all the previously paralysed muscles could be seen to be plump and well nourished. (3) *Cancer of the Rectum.*—A man, aged 50, from whom a cancerous rectum had been removed by the abdominal route. He was now soundly healed, and had normal actions of the bowel through the anus. The operation performed was not the combined abdomino-perineal operation; the whole operation was carried out in the Trendelenburg position through a median hypogastric incision. The operation was not applicable to cases in which the anus was involved in the growth, or so near it as to necessitate sacrifice of the anus, but it was applicable to all cases not less than 2 in. above the anus. After mobilizing the sigmoid and dividing the superior haemorrhoidal artery, the rectum was detached from the sacrum behind and the bladder in front until it could be cut off well below the growth and immediately above the anus. The upper section was made at the lower end of the sigmoid flexure and the length of bowel removed measured 9 or 10 in. The end of the sigmoid was then passed through the anus from above and sutured to the cut edge of the remaining anal segment of bowel. The peritoneum was carefully closed over the pelvic floor and the wound closed. Performed in this way there was no haemorrhage and remarkably little shock.

The Nutrition of Elementary School Children.—Dr. W. SPENCER BADGER, in a paper on this subject, discussed the various methods of assessing nutrition, and pointed out that clinical examination afforded the only reliable means of estimating its value. The popular belief that the nutrition of slum children was good was controverted. Among the common characteristics of malnutrition were expressionless countenance, mental dullness, mouth breathing, blepharitis, loss of muscular tone, half-open eyes, blueness of the extremities, and a harsh dry skin. The frequency of bronchitis and nasal catarrh in school children was commented upon. One-fourth of a series of 700 scholars were reported to be subject to night sweats. Malnutrition had a close association with disease, sometimes preceding and sometimes following it. Heart disease, particularly, was a nutritional disorder in school children. Dental caries had a widespread influence in producing malnutrition, and insufficiency of sleep was one of the prime preventable causes. The harmful effect of overwork operated mainly by reason of the work outside school hours being undertaken by the least fit and worst fed children. Malnutrition was frequently associated with poverty, but in such cases the poverty was commonly found to be accompanied by thriftlessness, ignorance, dirt, or neglect. It was remarkable how little alteration the nutrition of the children of thrifty and sober parents underwent. In the face of such abundant evidence of neglect as existed in the elementary schools it was regrettable that national philanthropy consisted so exclusively in giving assistance. While there were various agencies for the relief of destitution, there was a conspicuous disinclination to apply the proper remedies for the prevention of neglect. Drs. LILA GREIG, LOWE, GALBRAITH, and Mr. STACK discussed the paper, and Dr. BADGER replied.

Thrombosis and Embolism after Pelvic Operations.—Dr. FREDERICK EDGE suggested the prophylactic fixation of the thrombus by injections of antistreptococcal serum, the administration of horse serum, calcium lactate, and potassium iodide by the mouth. The volume of blood should be increased by copious saline solutions. Messrs. ALCOCK, DEANESLY, and STACK took part in the discussion which followed, and Dr. EDGE replied.

Intestinal Obstruction.—Mr. DEANESLY read a paper on this subject.

Exhibition of Pathological Specimens.—Mr. Deanesly showed several specimens of cancerous rectums removed by abdominal operation. Also a cancerous stricture of the transverse colon removed twelve months ago, the operation being completed by end-to-end suture of the divided bowel. The patient had recovered and was still in good health. Dr. Edge showed: (*a*) A uterus with chorion-epithelioma following a hydatidiform mole successfully removed by abdominal hysterectomy. (*b*) A uterus with soft degeneration of a small myoma. Dr. Codd showed a specimen of cerebral tumour from a girl aged 8. The chief symptoms were headache, blindness, optic atrophy, conjugate deviation of head and eyes to the left, Babinski's and Kernig's signs, progressive drowsiness, and at the last very profuse purulent nasal discharge. The tumour appeared to originate in the left crus and invaded the right crus, the third ventricle, the infundibulum, and perhaps the pituitary. The sphenoidal sinus was full of pus, but the floor of the sella turcica appeared to be intact. There was much calcareous change and cystic degeneration; the tumour was a psammoma.

YORKSHIRE BRANCH.

At a meeting of this Branch on April 16th, Dr. Gibson (Harrogate), President of the Branch, in the chair, Mr. Priestley Leech (Halifax) showed some *X-ray photographs* of fractured heads of humeri and of early bone tuberculosis. Mr. Basil Hughes (Bradford) read a paper on the utility of *Autogenous vaccines in the treatment of chronic joint affections*, notably rheumatoid arthritis and gonorrhoeal arthritis. Dr. Maxwell Telling drew attention to some points in the management and treatment of cases of grave or *Pernicious anaemia*. In the first place, he emphasized the necessity of the most scrupulous attention to the mouth to eliminate any source of oral sepsis, for certain cases of grave anaemia arose from this cause and could be cured by its removal; in true pernicious anaemia, however, some other factor was present, and the results of treatment on these lines were not so striking, though the treatment was not less necessary. The difficulty in feeding these patients was mentioned. In pernicious anaemia oro-gastro-intestinal attacks not infrequently occurred, often associated with pyrexia; the treatment was not, as a rule, to stop the administration of arsenic, but to continue it and to bring the alimentation down to the patient's powers of assimilation. The occurrence of mental disturbances and pyrexia was also discussed.

Election of President and New Members.—At a meeting of the Council on the same day Dr. Stanger (Wakefield) was unanimously appointed President-elect, and thirteen new members were elected.

An international exposition of town hygiene will be held at Lyons in 1914, from May 1st to November 1st. One of the objects is to show the organization of a modern city, especially from the sanitary point of view. The exposition will be divided into forty-two sections: Statistics and demography; administration of streets, roads, waterways, and other channels of communication; transport; drinking water; sewers and the purification of waters that have been used; disposal of solid residues; dwelling; furnishing; lighting; ventilation, heating, and refrigeration; alimentation of animal origin; milk and its derivatives: alimentation of vegetable origin; hygienic drinks; adulteration of foodstuffs, investigation of frauds; mineral waters; chemical products; protection of infancy and puericulture; school; military hygiene; care of the body and cleanliness; primary and secondary education; superior education; technical, professional, and household education; hygiene and protection of labour; social economy; police of cities and police lavatories; infectious diseases (parasites, microbes, fungi); disinfection; organization of public hygiene in States; departmental and municipal services of hygiene; public assistance and hospitals; the struggle against tuberculosis; the struggle against alcohol; touring; physical culture and sports; arts; photography; industries of the book, the advertisement and the newspaper; horticulture; electricity; posts, telegraphs, telephones. Professor Courmont, who is general commissioner of the exposition, has made it a condition that no alcoholic drink, with the exception of hygienic beverages, shall be admitted to the exposition.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

Debate on Alimentary Toxaemia (*concluded*).

Wednesday, May 7th, 1913.

Sir Francis Champneys, Bart., M.D., President, in the Chair.

Dr. H. D. Rolleston, in reopening the debate, said that the alimentary was not only much the largest mucous tract of the body, but was the most exposed to infection and intoxication. Though it was protected by the acid gastric juice against microbial activity, and by the liver against poisons, these lines of defence could be broken down. It was, however, possible to attribute too many disorders to intestinal toxaemia; many of the defects assumed to be toxic might be due to the passage of micro-organisms in small numbers into the circulation, and so into the tissues, as was shown by Adami's subinfection with *B. coli*, which he held played some part in cirrhosis and pernicious anaemia. Toxaemia and bacteriaemia might occur simultaneously, as was evidenced by the frequent association of chronic pancreatitis and portal cirrhosis. The digestive processes might be so modified or the circumstances so altered by a change in the intestinal flora, as to produce poisons out of ordinary food. Herter and Kendall had found that intestinal infantilism was associated with large numbers of *Bacillus infantilis* in the stools. The view that exophthalmic goitre might, in some instances, be due to alimentary toxaemia was supported by the facts that digestive disturbances were frequent, that a protein diet usually aggravated the symptoms, and that indicanuria was common. The relationship between arthritis and alimentary toxaemia afforded scope for discussion; chronic rheumatoid arthritis might be secondary to a focal infection in various parts of the alimentary canal. It seemed clear that the intestinal tract was primarily at fault in enterogenous cyanosis, and it was difficult to avoid the conclusion that in young children intestinal toxaemia was sometimes the cause of anaemia. It had long been known that indiscretions in diet and overeating caused chronic arterial and renal disease. The mechanism by which alimentary toxaemia might cause arterio-sclerosis was not yet proven; but it might do so by inducing thyroid insufficiency.

Dr. Douglas Wilson (Harrogate) based his views on the subject upon observation and treatment of 800 cases in which he believed the colon to have been the seat of toxic absorption. Practically all the cases were treated with colon irrigations of mineral water and other spa methods; 43 per cent. of the cases were males, 57 per cent. females. The condition occurred in families, and sometimes two or three generations had been affected. The onset was insidious. The patient usually sought advice at about 40 years of age, when the wear and tear of life were beginning to be felt. Constipation was present in most of the cases, and sometimes colon irrigations brought away hard old scybala. These subjects often had lax abdominal walls, though the remaining musculature of the body was vigorous and good. It was common to find the sigmoid spasmodically contracted. Usually the subjects of colon intoxication were depressed, irritable, and worried by small causes; there was difficulty in concentration and the memory suffered. It was a not sufficiently recognized cause of insomnia. There might be acute neuralgia and persistent hemicrania, as well as irregularity of pulse, both as to time and force. Fibrositis, gout, rheumatoid arthritis were other sequelae of intestinal derangement.

Dr. F. W. Brook said that he had for a long time examined the faeces of all cases of neurasthenia which came under his care, and had details of 54 cases, all showing an abnormal condition of the flora. He gave autogenous vaccines, commencing with very small doses, so as to minimize constitutional reactions, and found that patients expressed themselves as feeling better when the motions were found to be acid. Intestinal antiseptics were given from time to time, but only beta-naphthol and sulphur were found to be serviceable. A vegetarian diet was useful in rendering the stools acid.

Dr. ARMSTRONG (Buxton) believed that dental sepsis originated or kept up gastric disturbances and in some cases arthritic mischief, though recently there seemed to be a tendency to over-rate this cause for joint trouble. The treatment was divisible into three heads: (1) methods of emptying the stomach, (2) strengthening the atonic gastric wall, (3) measures to control the poisonous fermentation.

Dr. W. KNOWSLEY SIBLEY said that a system saturated with the toxins absorbed from an overloaded intestine was by no means an uncommon cause of a large number of apparently very different skin diseases. Psoriasis he regarded as often the result of the influences of toxins derived from the alimentary canal, and a change to a vegetarian diet would often cure an old-standing case. Many of the drugs useful in skin diseases—arsenic and quinine were good cases in point—were also intestinal disinfectants.

Dr. H. D. MCCULLOCH emphasized the fact that the localities where microbes were most prolific were those in which lymphatic channels and glands were most numerous. It was the lymph which most needed protection from microbic and toxic contamination.

Dr. J. F. BRISCOE commented on the rarity of gross intestinal lesions, such as appendicitis, in mental hospitals. Dr. Mott, pathologist at Claybury, had stated that there had not been a case of appendicitis found on the *post-mortem* table out of 2,000 deaths since he had held the post. Constipation was a link in the series of causes and consequences arising from the disturbed abdominal viscera; it encouraged irritability, perverted moral feelings, and melancholia; while physically it led to emaciation, rheumatism, and many other conditions. Sometimes a copious motion dissipated an attack of insanity. Stasis was a less formidable condition when the food had been thoroughly triturated before being swallowed. In the ten years 1902–11 the English Commissioners in Lunacy recorded only 75 deaths from appendicitis, typhlitis, or perityphlitis, ascertained in most cases by *post-mortem* examination.

After some remarks from Dr. ROBERT BELL and Dr. RALPH VINCENT the discussion was wound up by Dr. HALE WHITE, who began his reply by observing that it was obviously impossible to present, in a quarter of an hour, any adequate summary of a debate in which sixty speakers had taken part. Probably poisons were continually being formed from the contents of the alimentary canal, or they might be endotoxins derived from dead bacteria, but no harm followed so long as the constantly active defences of the body against such poisons were in full play. A great step forward would be made when experimental pathologists were able to say which cases of supposed alimentary toxaemia were really caused by disease of the liver, disease of thyroid, or disease of some other organ, or which were due to the formation of abnormal poisons or to an excess of normal poisons in the alimentary canal. There seemed to be a consensus of opinion that the phrase "alimentary toxaemia" should be limited to the absorption of chemical poisons, and should not include the passage into the blood of bacteria themselves, although this probably occurred more often than was usually thought. The discussion had shed very little light on the bacteriology of alimentary toxaemia originating in the gastro-intestinal tract. Probably among the intestinal bacteria the *Bacillus aminophilus intestinalis* and its allies would most repay research, but it certainly appeared that many of the statements of the French school on the intestinal flora needed serious revision, and that the case against indol had not been proved. In the clinical part of the discussion the dental surgeons seemed to be on surer ground than other speakers. Disease of the gums leading to periodontal disease was by far the most fruitful source of oral sepsis. Mouth breathing in children led to persistent marginal gingivitis, which was more intractable and serious in its results in mouth breathers. It followed that not only must teeth be treated, but that often it was necessary to treat nasal obstruction also. Probably the most important part of the treatment was local, but in the more severe examples the intelligent use of autogenous vaccines might be of distinct help. It was possible that in a few cases pyorrhoea alveolaris was secondary to a toxaemia arising from some other parts of the alimentary tract, or, at any rate, that the pyorrhoea was increased by the fact that the general resistance of the body was lowered by an alimentary toxaemia of other origin. The discussion had been of great use in directing attention to the fact that some diseases of the eye might be due to pyorrhoea alveolaris; what others were due to other forms of alimentary toxaemia could only be decided by future clinical observation. The extremely interesting question whether failure of accommodative power might not often be due to intestinal toxaemia needed further investigation. The urticaria which followed the ingestion of shellfish, copaiba, etc., in some persons was most likely an example of anaphylactic phenomena following the absorption of foreign proteins, and therefore not an instance of alimentary toxaemia. The purpura often associated with cirrhosis of the liver was probably an alimentary toxaemia in which the poison absorbed from the intestine was able to act, because the protective influence of the liver was in abeyance. Henoch's purpura might be an example of alimentary toxaemia, and the dark-blue tint of the skin in enterogenous cyanosis was almost certainly due to alimentary toxaemia, and the brown cutaneous pigment so often seen in disease of the intestines might have a like cause. It had been urged that in consequence of the erect posture of man the intestines tended to drop; that to overcome this peritoneal bands were evolved; that they produced kinks; that these led to stagnation of the intestinal contents and increased putrefaction, and this was followed by the formation of poisons, which, passing into the general circulation, caused definite symptoms, and predisposed to many diseases. The question would have to be solved by anatomists. Were these bands to be found in all animals in whom the body was usually vertical—for example, in apes, gibbons, and penguins? were there evidences of them in animals whose bodies approached the vertical—for example, giraffes? and were there what might be called reverse bands in bats that spend so much of their time head downwards? if present in animals that adopted the erect posture, did such animals have intestinal stasis? Those who laid great stress on an ileal kink as a cause of intestinal stasis did not seem to have estimated at its full value the strength and activity of the ileo-caecal sphincter; much of the holding back of the intestinal contents at the end of the ileum was normal, and when abnormal was often due to spasm of the ileo-caecal muscle. Many of the statements about kinks and stasis claimed support from *x*-ray examinations after bismuth or barium sulphate, but it had been urged on the other hand that sometimes food was given too soon after a bismuth meal; that sometimes so much bismuth was given that its weight might invalidate the observations; that allowance was not made for normal variations in the average time taken in the passage of a bismuth meal, anything differing from the average being taken as abnormal; that sometimes the bismuth mixture lagged in the stomach because it was nasty, although in the same patient a meal would leave the stomach normally if palatable; that the so-called writhing of the duodenum was nothing else than the normal peristalsis and segmentation rendered more clearly visible than usual by the great quantity of bismuth-containing chyme present; that the *x* rays did not show the duodenum to be dilated in cases of duodenal ulcer; and that many of the kinks which the *x* rays were supposed to show depended upon the fact that the *x*-ray picture was taken in a single plane. As the *x*-ray work on this subject had been so severely criticized, it should be repeated by independent observers. Those who believed that evolutionary peritoneal bands often led to intestinal stasis because they produced kinks, especially a kink at the last part of the ileum, thought that as a further result a kink formed at the end of the duodenum, and this and the stomach dilated, and either might become ulcerated. The debate had not provided any statistical evidence to show in what proportion of sufferers from duodenal or gastric ulcers such kinks were found, nor had any experimental evidence been brought forward to show that in animals such ulcers formed as a result of an artificially induced ileal kink. It seemed that the onus of proving their contention lay with those who believed that these phenomena followed intestinal stasis. It was agreed that in the vast majority of cases medical treatment sufficed. If the cases that now

seemed to some to justify surgical treatment had been treated in the first stages by proper medical means surgical interference would not be necessary, so that, when this was widely appreciated, cases ought never to become so ill that surgical treatment would be contemplated, and it might be hoped that one result of the discussion would be that "the drainage scheme" of patients would be kept in sufficiently good order to render surgical interference unnecessary.

SURGICAL SECTION.

AT a meeting on May 6th, Mr. G. H. MAKINS, President, in the chair, Mr. J. HUTCHINSON, in a paper on *Aberrant renal arteries*, said that it might have been thought that symptoms would be caused more commonly in females with movable kidney, and would come on early in life, and be produced by an artery lying in front of the ureter. But in the 21 cases seen at the London Hospital between 1904–12, 15 were in males, 6 in females, and the right kidney was affected twice as commonly as the left. It was usually fixed in position, and the aberrant artery lay posterior. The onset of symptoms was always sudden, commonly between the age of 15 and 25; in only 4 of these cases did they develop after 30. In 2 the kidney had already been fixed by operation, and the true condition was not diagnosed. It had to be diagnosed from duodenal ulcer, gall stones, renal colic, etc. He thought the main points in diagnosis to be periodic attacks of right renal pain followed by a dull aching in males between the ages of 15 and 25. The patients lay on the side of the pain, it was unrelieved by lying down, and was accompanied by sweating and vomiting; the vomiting often relieved the pain. The cystoscope might show congestion of the ureteral orifice, and the *x* ray the absence of a calculus. Albuminuria and haematuria were occasionally present. With these signs a provisional diagnosis could be made and the lumbar region explored. The aberrant artery often produced a narrowing of the ureter and distortion of the pelvis. In these cases removal of the artery might be insufficient, and he was tempted to perform a plastic operation, and sew up a longitudinal incision transversely. The published records of this plastic operation were bad; he could not advise it. If necessary, he performed nephrectomy, all but two of the recorded cases being one-sided. Mr. F. KIDD said a positive diagnosis could be made by intra-ureteral injection of 8 c.cm. of a 5 per cent. solution of collargol. A pyelograph could then be made and a dilated pelvis seen. Mr. A. JOHNSON said that 15 per cent. of renal arteries were abnormal, and the veins still more frequently. Pyelography after a collargol injection would show a dilated pelvis, and in the absence of a movable kidney, stone, or tumour, an aberrant artery should be diagnosed. Mr. MCADAM ECCLES recorded a case of intermittent hydronephrosis due to an aberrant vein. The vein was tied, and the hydronephrosis at once disappeared. Mr. F. KIDD recorded two cases of *Splenectomy*. One was in a patient who four years previously had been sent to a fever hospital with a diagnosis of typhoid fever; the Widal reaction was negative and Banti's disease diagnosed. She was of a dirty yellow colour, had had haematemesis for one year, her periods had ceased; the liver was small and the spleen large; the blood showed a typical anaemia. She suddenly developed ascites and was tapped. Splenectomy was performed. The veins were much enlarged and caused trouble; the liver was hard and cirrhotic. A good recovery was made, and menstruation recommenced and her blood returned to normal. The second patient gave a three months' history of pain in the left hypochondrium relieved by vomiting, and referred to the left shoulder-joint. The spleen, which was enlarged, was removed, and it was found to be in a condition of hypertrophy, both macroscopically and microscopically. The pain in the left shoulder-joint was caused by irritation of the fifth cervical root; it gave origin to both the phrenic and the suprascapular nerves. He thought splenectomy should be performed in all cases where the liver was cirrhotic and the spleen enlarged. It was best done through a 4-inch incision through the left rectus; a 2-inch transverse incision could be added to it if necessary. Mr. J. HUTCHINSON recorded a case of splenectomy for splenic anaemia with haematemesis and marked failure of mental development. After the operation there was great improvement in mentality. Sir JOHN BLAND-SUTTON stated that he had performed splenectomy in 10 cases for wandering spleen, injury, tubercle, and Banti's disease. One was eighteen years ago. He thought the after-effects—thirst, restlessness, and pain in the bones—was due not to overaction of the bone-marrow, but to sepsis of the splenic pedicle. He was sure there was a great future for splenectomy. The PRESIDENT showed a case in which splenectomy had been performed fifteen months previously for splenic anaemia. The white corpuscles rose to 43,000 on the second day after the operation, and fell to 12,000 on the ninth day.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on May 7th, Mr. J. M. COTTERILL, President, in the chair, Dr. H. M. TRAQUAIR, in a paper on *Bi-temporal hemiopia* (postponed from March 5th), described the condition as occurring in two types: the *scotomatous type*, where there was a scotoma occupying part or all of the area between the fixation point and the blind spot, associated with a varying degree of defect of the temporal field, and the *non-scotomatous type*, where the defect diminished in intensity from the periphery to the centre of the temporal field. For the detection of these defects the ordinary examination was often inadequate, and the use of small and large objects of known diameter and of different colours, and the additional employment of a large Bjerrum screen (2 metres) were necessary. Following this special technique the author gave details of his examination in a series of cases of hemiopia. Of those of scotomatous type, one was a case of acromegaly with pronounced neighbourhood signs (Cushing's Class I), and the other of maxillary empyema with ocular disturbance. Some of the chief points elicited by a long series of vision fields were the peculiar regular progress of the field defect, the sharp vertical and horizontal edges of the scotoma representing the apices of several quadrants, the appearance of vertical splitting in the fields, and the great power of recovery (apparently spontaneous) in both cases. This recovery seemed to indicate rather a vascular congestion or oedema in the region of the chiasma than a tumour pressure. The examples of non-scotomatous type were three cases of acromegaly with absence of neighbour signs but predominant hypophyseal symptoms. These like those of the first group, showed defects of low intensity, which were only revealed by the use of the special methods of examination employed. It seemed probable, therefore, that such defects of low intensity were really commoner than was indicated by present records. Thus the records of a large number of cases of acromegaly show such field defects in only 50 per cent., while he, in a small series of seven acromegalies, had found field defects in all. The scotomatous type was associated as a general rule with an active lesion and a short case-history, and if other evidence, such as the enlargement of the pituitary fossa on *x*-ray examination, pointed to tumour, it indicated a malignant rather than a benign tumour. The non-scotomatous type was associated with the opposite conditions. Dr. LEWIS THATCHER described a case of congenital *Malformation of the urinary apparatus* with absence of the abdominal wall musculature in a male child which came under observation at the age of 3 weeks, and died when aged 2 months. There was some asymmetry of the skull, and flattening of the pinnae of the ears. The chest was markedly prow-shaped (a deformity absent at birth). The abdominal wall showed a remarkable wrinkling and redundancy of the skin, which was also sunk in and showed clearly the outline of liver, spleen, kidneys, and a greatly enlarged and thickened bladder. Long deep longitudinal furrows scored the surface, and at the foot of one of these lay the umbilicus, in normal position, but firmly attached to the apex of the bladder. The cause of death was bronchopneumonia. The autopsy showed an absence of the recti and of the greater part of the oblique and transverse muscles. The urethra was patent and healthy, but the bladder wall was thickened to three-quarters of an inch, and the ureteral openings were almost obstructed by this hypertrophy, leading to great dilatation and hypertrophy of the ureters and to some hydronephrosis of the kidneys. Both testicles were undescended. Dr. Thatcher analysed 11 similar cases which he had found in the literature. All were in males, and showed close agreement both in

the external picture and also in the condition of the internal organs. Various explanations had been put forward, but the most probable was that of Stumme. He ascribed it to an increase of intra-abdominal tension caused by enlargement of the bladder. This took place at an early period before the muscles of the abdominal wall had developed, for the condition was one of muscular aplasia and not of atrophy. The thickening of the bladder accounted for the blocking of the ureteral openings and the secondary dilatation of the ureters. This theory made the change in the bladder the primary one; and this had been suggested by Dr. John Thomson as due to an inco-ordination of the vesical sphincter, analogous in its origin and effects to congenital hypertrophy of the pylorus.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

AT a meeting on April 11th, Dr. T. P. C. KIRKPATRICK in the chair, Dr. T. T. O'FARRELL urged the desirability of the hospital statistics of Dublin being all returned on the same basis, and described the system in use at St. Vincent's Hospital, which was found to work satisfactorily. It was based on the card-indexing system, and distributed the work over a number of people. The registrar's work was confined to keeping the admission and discharge book, filing the case sheets and cards, and at the end of the year drawing up a digest of the cases in an analysis book. Its details were briefly as follows: (1) Cases are divided into males and females, the method of registration for each being the same. (2) Each patient on admission is provided with the usual history sheets, etc., together with a "coloured card"—red for males and blue for females. (3) At the end of each week the "coloured cards" of each new patient, containing preliminary details, are sent to the registrar, who copies them into the admission and discharge book, and having given the card its registration number, returns it to the ward. (4) At the end of each case all the notes are completed and sent up to the registrar. (5) The registrar then enters the date of discharge, diagnosis, date of operation, if any, and result in the book, together with any short comment necessary in the observations column. He also fills in the number of the disease as it appears in the College of Physicians' *Nomenclature of Diseases*. (6) The registrar then files the charts and coloured cards as follows: (*a*) History sheets and other notes according to registration number in serial order in batches of ten, each batch being enclosed in an open stiff paper pocket, special indicators of a remarkable colour being placed at the hundreds intervals; (*b*) the "coloured cards" are filed alphabetically, according to the surname of the patient. Both these files are in the form of drawers in a cabinet, and worded according to the card-indexing system. At the end of the year these files are cleared, the contents being placed in boxes, numbered according to year, and stored on shelves in an easily accessible place. (7) At the end of the year the "analysis book" is drawn up, which is a rearrangement of the cases according to disease. The register number of each case is marked down, so that all the cases of any one disease treated can be seen at a glance and their case-sheets easily referred to if required. (8) The final report is drawn up from the analysis book, the total number of cases of each disease, with their results, being set down.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

AT a meeting on May 2nd, Dr. G. P. SHUTER, President, in the chair, Professor FREDERICK HOBDAY, F.R.C.V.S., read, by invitation, a paper concerning *Diseases communicable from animals to man*. In regard to glanders he said that until about ten years ago it was a most unusual thing for a day to pass without several fresh glanders cases being reported, and the veterinary inspector was only permitted to interfere with the clinically glandered cases, and not to enforce the mallein test. Now, however, when an outbreak occurred in a stable the test was applied and all reactors were valued and slaughtered. Although not a common disease in man, glanders used to be sufficiently often met with in all large cities to be of interest to medical men. The absence of definite and differentiating symptoms made it necessary to bear the disease in mind when treating stable hands. In one of the cases he had seen the patient had been ailing off and on for ten months without a diagnosis being made, and at the *post-mortem* examination the lungs were found full of glanders nodules. In the year 1901, 2,370 horses were reported in Great Britain as suffering from the disease. Last year the numbers had been reduced to only 504 individual horses for the whole of Great Britain. In the horse, dog, and cat, tuberculosis was well recognized, and in connexion with the latter two this fact ought to be kept well in mind on account of their constant presence in the house as pets. With regard to mange every species of domesticated and many wild animals might become the subject of an attack. It was always caused by the presence of a parasite caught from somewhere, and was contagious to man as well as to other animals. The parasite did not of necessity find its new host, when transmitted to man, as comfortable and convenient a resting-place as its original host, and as a rule lived its life but did not propagate. Mange as acquired from dogs and cats was sometimes unrecognized, and was treated unsuccessfully either as pruritus or eczema. It was manifested by a troublesome irritation and vesicular eruption, with small black spots at the places where the heads had been removed by scratching. In reply to various questions, Professor Hobday stated that in the cases of ringworm infection caught from horse or calf which he had seen himself, the persons had been infected on the face or arms and not on the head. He had no personal experience of the ophthalmic reaction, either with mallein or tuberculin, and could not say whether damage occurred to the eyesight as was sometimes the case in human subjects. It was not generally admitted by veterinarians that cats were the subjects of scarlet fever, or of true diphtheria, nor were they especially susceptible to glanders, although under certain circumstances they might of course become the carriers of the contagion. The disease known as bird diphtheria, and commonly met with in wood-pigeons and other birds, had no analogy with the disease known as diphtheria in the human species.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

AT a meeting of the Northern and Midland Division on April 24th, Dr. J. G. SOUTAR, President, in the chair, Dr. CASSIDY gave an account of the history of the Lancaster County Asylum. The accommodation provided in 1815 was for 150 patients; in 1824 the number had risen to 250, and in 1913 to 2,450. Among methods of treatment in vogue in the early days of its work was the warm room and the whirligig chair, and the restraining of patients by fastening them to the wall. All the windows in the wards were kept carefully shut, and an attendant was reported if he left one open. Dr. DOUGLAS, in a paper on the Mental Deficiency Bill, 1913, defined the different classes of persons deemed to be defectives within the meaning of the bill, distinguishing between idiots, imbeciles, feeble-minded, and moral imbeciles. He then mentioned how these cases had been dealt with up to the present time. He said that it was by careful classification alone that one could hope to obtain any tangible result from the education and training of the different classes of persons deemed defective within the meaning of the bill. A combination of counties, forming associated areas, aided by institutions already in existence, should be able to deal with the matter. Each of the voluntary institutions might be used as a centre or filtering ground through which all defectives in the area would pass before being drafted to the other homes or colonies. Dr. BLAIR showed a case of *Catalepsy* in one of three sisters, all of whom had been treated at Lancaster Asylum, and she was there first from the beginning of 1906 to the end of 1908. She was admitted again in January, 1910, and for the past three years had been insensible. She gave no response, or very slightly at times, to stimuli, and had to be forcibly fed. At present she showed slight indications of returning sensibility. Dr. ROWS gave a demonstration of interesting objects and processes in the pathological laboratory of Lancaster County Asylum, where the meeting was held.

Reviews.

INSECTS AND DISEASE.

WITHIN the past few years the important part played by insects and other animals in the transmission of disease has become more and more realized. Not only is this true of the mosquito and other tropical insects, but even our common house-fly cannot be exempted. A popular account of the way in which insects may spread or cause some of our common diseases has been given in a little volume entitled *Insects and Disease*,[1] by Mr. R. W. DOANE, Assistant Professor of Entomology in the Leland Stanford Junior University. The volume is one of the American Nature Series. The title does not sufficiently indicate the contents, since insects are not the only parasites dealt with. There is a chapter on bacteria and protozoa, and another on ticks and mites, these latter being frequently regarded as insects by the uninitiated. The general principles of parasitism are also briefly treated. The author claims it only as a "popular account" and as such it must be judged. From this standpoint it may be stated that the author has been successful in his attempt. The book is written in a popular style and is not without humour. It is illustrated by a series of admirable and instructive photographs. To the systematist or to the student of tropical medicine, whether human or veterinary, the book will yield little that is new, but the general reader will no doubt find in it much to interest him, and it is to be hoped that many belonging to that class will read it. Men of science are too prone to hide their light under a bushel, with the result that all too little is known of the economic value of much of the work which is being done. The inevitable effect of this is the lack of funds in this country to assist in carrying on work of this nature. If only the intelligent person with means at his command could be made to realize the importance of much of the good work now being unostentatiously carried on, they might be stimulated to give money for its furtherance. A book like the one before us enables them to become acquainted with some of the results already achieved. Or, again, the importance of flies in the dissemination of such diseases as enteric fever or even of the summer diarrhoea of children, is not yet appreciated by the public at large. These are some of the facts to which the author draws attention, and sufficient evidence is detailed to justify the conclusions which have so far been made. As a work of the missionary type the book is to be commended. There is also a good bibliography which will materially assist those desirous of seeking for further information.

Another book, which has just been published, *The Reduction of Domestic Flies*,[2] by Dr. E. H. Ross, may be commended as making to the same end. It discusses the life-history and habits of domestic flies, both in this country and in warmer regions; the egg, larva, and chrysalis are described, the flies' enemies are enumerated, and a campaign against these pests is first outlined and then worked out in detail. A chapter is devoted to the justification of expenditure of money and energy in suppressing the plague of flies, and there is another chapter, written in very popular style, tracing the life-history of a female fly from her birth in a manure heap until her death by fungus infection, leaving a numerous progeny behind her. The book is well illustrated by photographs of larvae and flies and diagrams showing their anatomy and habits. Its publication at this season of the year is opportune even in this country, and it will be found extremely useful by residents in the tropics and sub-tropics.

ORTHOPAEDICS.

IN a book on orthopaedics for the general practitioner, Dr. GEORG MÜLLER[3] of Berlin sets out to supply post-graduate instruction on orthopaedics to those who cannot leave their practices or for other reasons cannot attend a university or hospital course of instruction on the subject. The book has no pretensions to the completeness of a full treatise on the subject, and the author, as he says, only treats of anatomical, physiological, and pathological-anatomical relations so far as they are strictly necessary for understanding practical treatment. The work is divided into a general and a special part. In the former, after a short historical review, the various materials for making temporary and permanent appliances, such as plaster-of-Paris and celluloid, Hessing's apparatus and artificial limbs, massage, gymnastics, hydropathic treatment, diet, Bier's hyperaemic treatment, and the serum therapy of surgical tuberculosis are dealt with at moderate length. In the special part the conditions, including joint diseases, usually treated of in books on orthopaedics are considered briefly. In a book of this sort nothing very novel is to be looked for. The author briefly describes the morbid conditions, gives an adequate account of the usual methods of treatment, and indicates briefly those which he recommends as best or most expedient. Although we have not the pleasure of Dr. Müller's acquaintance, yet after looking at the illustrations of this book we feel that his genial personality is familiar to us, for his likeness appears in twenty-one of them.

The good opinion expressed five years ago of the first edition of Dr. LOVETT's book upon *Lateral Curvature of the Spine*[4] (BRITISH MEDICAL JOURNAL, 1908, vol. i, p. 992, April 25th) has not been altered by the lapse of time, and we now welcome the second edition. The form and scope of the book are unchanged, but it is a good deal more than a mere reprint, for the whole has evidently been carefully revised and brought up to date. The number of illustrations has been increased, and a chapter has been added on school life and scoliosis. These changes are all for the better, and we can but repeat and emphasize the recommendation made in 1908. Dr. Lovett does not claim to be able to work miracles upon deformed spines, but the moderation of his statements and the good sense of his reasoning are far more convincing than the extravagant promises made on behalf of some methods of treatment. Particularly interesting, as showing the importance of unremitting and thorough treatment, are the illustrations on page 167, which show the progress of a case during seven years from bad to worse, owing to discontinuous and inefficient treatment.

TEXTBOOKS OF OPHTHALMOLOGY.

A VOLUME recently issued by the University of London Press cannot fail to be a boon to every student and general practitioner into whose hands it falls. There are so many excellent manuals on ophthalmology written in the English language that it seemed as though there could be no place for another, and yet, now that we have the latest book in our hands, we feel that it has given the student exactly what he requires. Mr. DEVEREUX MARSHALL has compiled a modest volume on *Diseases of the Eyes*,[5] which contains the clinical teaching the ophthalmic dresser needs to supplement his practical work at the hospital. He will here find the most modern practice, and will not have to wade through pages of mathematical optics or of abstruse pathology to discover the exact symptoms of a disease and the best means of treating it. Mr. Marshall rightly assumes that every student has already had a course of optics and physiology and is acquainted with the simple dioptrics of the eye. He proceeds at once to practical teaching. The chapters upon refraction and upon the examination of the eye are admirable, and inculcate that good style which is as essential to the oculist as it is to the cricketer. The correct method of refraction is to perform an accurate retinoscopy and then to proceed with the trial lenses and test types. Every student should realize that unless he can use the retinoscope he cannot refract. Mr. Marshall's

[1] *Insects and Disease.* By Rennie W. Doane, A.B., Assistant Professor of Entomology, Leland Stanford Junior University. London: Constable and Co. (Demy 8vo, pp. 241. Price, 8s. net.) *American Nature Series.* Group iv, Working with Nature.

[2] *The Reduction of Domestic Flies.* By E. Halford Ross, M.R.C.S., L.R.C.P.Lond. London: John Murray. 1913. (Med. 8vo, pp. 111; illustrations 18. 5s. net.)

[3] *Die Orthopädie des praktischen Aerztes.* By Dr. Georg Müller, Berlin. Berlin and Vienna: Urban and Schwarzenberg. (S. roy. 8vo, pp. 258. Mk. 10.)

[4] *Lateral Curvature of the Spine and Round Shoulders.* By Robert W. Lovett, M.D.Boston. Second edition, revised and enlarged. London: Rebman Limited. 1912. (Demy 8vo, pp. 202; 171 illustrations. 7s. 6d. net.)

[5] *Diseases of the Eyes.* By C. Devereux Marshall, F.R.C.S. London Medical Publications. London; University of London Press, Hodder and Stoughton, and Henry Frowde. 1912. (Demy 8vo, pp. 316; figs. 95. 10s. 6d. net.)

views upon the treatment of lacrymal obstruction are thoroughly modern; in this respect, as in many others, he has discarded methods which, though of respectable antiquity, are founded upon a false pathology, and can only bring discredit upon the surgeon and his art. The chapter upon colour blindness is exceedingly valuable. Tests founded upon the Young-Helmholtz theory of colour vision are justly condemned, and the Holmgren test, which has been repeatedly shown to be valueless in this country and in Germany, is utterly discountenanced. Instead, the Edridge-Green lamp is recommended, and methods which really unmask the dangerously colour blind are carefully explained. Judging the book by the standard necessary for the student and the general practitioner we can give it the highest praise, and can confidently recommend it. It is, however, capable of improvement in some respects. "Myosis," although often spelt with a "y," should be "miosis." The author might reconsider his doubts about the etiology of episcleritis, for the evidence brought forward by Verhoeff and others points very strongly to a tuberculous origin. It should be noted that Paton's researches convinced him that it was impossible to decide upon which side of the brain a tumour was situated from a study of the discs. The cases in which the tumour was found to be situated on the same side as that on which the oldest or most intense optic neuritis was present were about equally balanced with those in which the tumour was on the opposite side. Nyctalopia is not mentioned as a symptom of tobacco amblyopia. These and some other minor points are all the defects noted in a book which is admirably adapted to the use of students.

The appearance of a second edition of Professor RÖMER'S *Lehrbuch der Augenheilkunde*[6] is a proof that it has been successful in Germany, and the fact that the first volume of the American translation has been published points to its popularity outside Germany. We reviewed the first edition at considerable length, pointing out that it represented the complete course of lectures given by the author at the University of Greifswald. The old bulky volume has now been divided, and the present edition is sold in two volumes. An attempt has been made to make the diction in places more concise, and the space so gained has been utilized for more illustrations and coloured plates. A marginal analysis has been added, so that it is comparatively easy for the reader to find the paragraph relating to the subject he is searching for. The university eye clinic has been able to train its own ophthalmoscopic artist, who has contributed some excellent plates to the new edition. Some of these represent the external diseases of the eye, others retinal conditions. The two volumes contain 32 coloured plates and 268 illustrations. Although the subject is presented in the form of lectures, the arrangement of the book is of the usual kind. The first chapter deals with the clinical examination of the anterior part of the eye, and is followed by one upon the diseases of the conjunctiva and cornea. The iris and lens are next considered, and then the vitreous and the optic nerve. The retina and choroid occupy Sections VII and VIII. The first volume is ended by chapters upon the sclera and the eyelids. The second volume treats of diseases of the lacrymal apparatus, of the orbit, of injuries to the eyes, glaucoma, the pupil, strabismus, paralysis of the ocular muscles, ocular neurology, and of the functional investigation of the eyes, in the order named. The index, as is usual in German books, is not very elaborate, only one, or at most two, references being given under each head. When we last reviewed the book we concluded that it was a very good one, but pointed out certain imperfections here and there; these have not been removed; thus, under "glaucoma" very little information is given about the newer operations for glaucoma which seek to establish a filtration scar. Elliott's trephining operation, Holth's punch method, and Herbert's flap operation are not even mentioned. The whole question of the ocular circulation and the theory of glaucoma is exhaustively treated and has been brought up to date, but the valuable anatomical discoveries made by Thomson Henderson with reference to the action of iridectomy and sclerosis of the pectinate ligament are not mentioned. In fact, for Römer, British ophthalmology seems hardly to exist, for, as far as we can see, Priestley Smith is the only English ophthalmologist mentioned in the book. We find the same thing when we come to the article on colour-vision tests. Edridge-Green's theory and his lantern are not mentioned. Even the Young-Helmholtz theory escapes notice, whereas two pages are devoted to Hering's theory of colour vision, a theory which is now much discredited. In spite of small defects Römer's book is a valuable addition to ophthalmic literature, and the English translation may be commended to the general practitioner, for whom Römer wrote the book.

[6] *Lehrbuch der Augenheilkunde in der Form klinischer Besprechungen.* Von Dr. Paul Römer. Erster und Zweiter Bands. Zweiter Auflage. Berlin and Vienna: Urban and Schwarzenberg. 1913. (Sup. roy. 8vo. Vol. i, 396, Tfn. 21, Mk.16; Geb., Mk.18. Vol. ii, pp. 381–828. Tfn. 22–32, Abbn. 152, Mk.8.)

THE SURGEON'S WORKSTEAD.

IN the preface to his book on the working-place, or to coin a word, the "workstead," of the surgeon and orthopaedist,[7] Dr. OSCAR LANGEMAK says that its object is to show how with comparatively scanty means the objective necessaries of surgical and orthopaedic practice may be provided; what they are and what they cost. Dr. Langemak takes nothing for granted, and begins with the waiting-room. This should, if possible, be remote from the consulting-room, so that the waiting patients may not be disturbed by the cries of pain from the patient under treatment, and that the latter, on leaving, need not pass through the waiting-room. The word-picture which he draws of some surgeons' waiting-rooms is far from pleasant, nor are the illustrations which he prints of the waiting-room as it ought to be, very attractive. This will, perhaps, be understood when it is noted that he allows only £5 15s. (Mk. 115) for the purchase of furniture. Almost every imaginable detail of apparatus useful in the examination and treatment of private patients is mentioned. Many ingenious contrivances are of the author's own invention. Various methods of preparing sutures and ligatures and dressings are considered, and the best method of preserving rubber goods is not forgotten, nor does the author omit prescriptions for ointments to be used in the surgery. *X*-ray apparatus, fittings and chemicals for the pathological laboratory, methods of lighting, case-books, machines for mechanical treatment, plaster-of-Paris—all are considered, and advice is given as to where to buy everything and what to pay for it. In the section on the installation of a private hospital the same thoroughness is manifest. Lists of bed-linen and nurses' clothing, discussions of all the details of ward furniture down to spittoons and towel-horses here find places, as well as full lists for instruments for anaesthesia and all operations. The book will probably be of considerable use in Germany, but its value in this country must be seriously reduced by the fact that many of the appliances of the patterns recommended are not obtainable in England, and that the firms named and prices quoted are of course German.

[7] *Die Arbeitstätte des Chirurgen und Orthopäden (mit Winken für Einrichtung).* Von Privatkliniken von Dr. Oscar Langemak, Specialarzt für Chirurgie und Orthopädie in Erfurt. Jena: Gustav Fischer. 1912. (Med. 8vo, pp. 189; Abbn. 45. Mk. 5.)

NOTES ON BOOKS.

FOR those who love children there is, perhaps, no more fascinating occupation than to watch from day to day the gradual awakening of the mind of a little child. The "new-born denizen of life's great city" has been a source of inspiration to innumerable writers, amongst whom must be reckoned the German poet, OTTO ERNST, whose charming study of his little daughter *Roswitha*[8] has recently been translated into English by Mr. A. C. CATON. Herr Ernst is well known to his fellow-countrymen for his exquisite portrayal of the short joys and sorrows of childhood; and he has given here a delightful picture of a German home and the doings of his five children, the youngest of whom gives her name to his book. There are few of his readers, we imagine, who will not fall under the spell of this pet and plaything of the whole household and the queen of her learned father's heart. *Roswitha* is a wonderfully close and subtle analysis of child nature; and English readers owe a debt of gratitude to Mr. Caton for his admirable translation of a most interesting and

[8] *Roswitha.* Being leaves from the life of my little daughter. By Otto Ernst. Translated by A. C. Caton. London: A. C. Caton. 1913. (Cr. 8vo, pp. 322. Price 5s. net.)

attractive book. The grace and innocence of early childhood have seldom been more delicately or more lovingly described; and the baby girl to whom they are dedicated is worthy to rank beside the nameless child who inspired one of the most beautiful of Longfellow's poems:

> On thy head
> The glory of the morn is shed,
> Like a celestial benison!
> Here at the portal thou dost stand,
> And with thy little hand
> Thou openest the mysterious gate
> Into the future's undiscovered land.

At a time when research is vigorously attacked as being productive of no useful results a book which deals in popular language with the progress and attainments of modern medicine should be welcome. Such a book is *Bacteria*,[9] by Dr. MAX SCHOTTELIUS, written with the object of promoting an understanding of the responsibility of medical action in the fight against disease. The ground covered is comprehensive and includes a chapter on protozoa, which, though outside the scope of the title, is quite germane to the theme. With so rapidly moving a science as bacteriology a book on the subject soon becomes out of date, but at this time of day one does not expect to find the statement that, "if tuberculosis is conveyed to man, and especially to children, by milk, it is by human tubercle bacilli which have got into the milk." That is a particularly unfortunate statement in a book designed to popularize preventive medicine. In other respects the views adopted are as recent as can reasonably be expected. With so much good material and so fascinating a subject, it is a pity that a little more care has not been taken with the English translation. There is much good stuff in the book, and it should appeal to the laity and to such members of the profession as require a brief summary of the subject. Ten excellent coloured plates atone for a number of split infinitives.

A Roosevelt Hospital Graduate Nurse has written under the title of *A Stitch in Time*[10] a kind of first-aid guide to the common emergencies, accidents, and every-day troubles. By using clear terse descriptions much more has been included than in the average first-aid guide, and the book contains excellent hints on the preservation of health, the treatment of minor ailments, and a useful list of invalid foods. It is essentially a practical book, useful to the householder, and one from which the medical man can glean a few wrinkles.

The failure to obtain a sufficient number of recruits for the Territorial Force, and the want of interest and even dislike manifested by so many of the younger generation for any form of military service, has given rise to much discussion as to the merits and demerits of conscription in this country. One of the most ardent supporters of compulsory military service is General Sir IAN HAMILTON, whose stirring speech on *National Life and National Training*,[11] which was delivered at Birmingham in September last, has just been published as a pamphlet. Sir Ian Hamilton, foreseeing a time when the great European Powers will "Cry havoc! and let slip the dogs of war," suggests the adoption of enforced military training in every boys' school in the kingdom as the most effectual means of preparing for the conflict which he regards as almost inevitable. He states his reasons for this proposal very clearly and temperately. His sympathy with boyhood has given him a thorough understanding of the mental and physical needs of the average English boy; and his pages are characterized by a good humour and common sense that should do much to reconcile to his opinions even the most confirmed antimilitarists amongst his readers. His words are at once a warning and an appeal on behalf of that boyhood upon whose well-being and efficiency the future welfare of the race depends, and should be read with attention by all those into whose hands the destinies of the British Empire have been confided.

[9] *Bacteria*. By Max Schottelius. Translated by Staff Surgeon Herbert Geoghegan, R.N. Second edition. Oxford Medical Publications. London: Henry Frowde and Hodder and Stoughton. (Cr. 8vo, pp. 336; figs. 33; plates 10. 8s. 6d. net.

[10] *A Stitch in Time*. Simple and practical remedies for use in emergencies. By a Roosevelt Hospital Graduate Nurse and a Grateful Patient. New York and London: G. P. Putnam's Sons. 1912. (Crown 8vo, pp. 30. 3s. 6d. net.)

[11] *National Life and National Training*. By General Sir Ian Hamilton, G.C.B. London: P. S. King and Son. 1913. (Cr. 8vo, pp. 55; 6d. net.)

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE annual general meeting of the above society was held on Tuesday, May 6th, Sir Thomas Boor Crosby, President, in the chair. Twenty members were present. The Secretary read the following report for 1912, which was adopted:

Since the last report eight new members were elected; seven died and three resigned. The society consists at the present time of 1 honorary member, 152 life, and 149 ordinary members, making a total of 302, which, considering the number of medical men who are eligible for membership, is but a very small proportion.

The advantages of the society, and the very great amount of good which it does, cannot be better shown than by a short study of the balance sheet for the year. The invested funds amount to £101,600, from which was derived in interest the sum of £3,180 5s. 9d.; £361 3s. was received in subscriptions and donations. Amongst the annuitants of the charity—namely, 46 widows and 11 orphans, the sum of £3,066 was distributed, each widow receiving on an average £50, besides an additional £10 as a Christmas gift, and each orphan £15 and a gift of £3 at Christmas. The grants to orphans have been increased from £15 to £25 per annum.

The Copeland Fund is a special fund which enables the society to grant to any widow or orphan already in receipt of the society's ordinary relief, extraordinary assistance in special circumstances of unusual distress, such as blindness, paralysis, insanity, severe disabling accident or grave permanent disease, and to continue such extra relief in the case of orphans beyond the age of 16 or 18 years (at which under the society's existing by-laws, the ordinary relief ceases) for such further period as the Court of Directors may think fit.

One widow and five orphans were elected on to the funds during the year, and on December 31st there were 46 widows and 11 orphans in receipt of grants. One of the widows has been on the books since 1854, and has already received over £2,420.

Relief is only granted to the widows and orphans of deceased members who have paid their annual subscription for three years, or who are life members. During the year thirty-two letters were received from widows of medical men who, in many instances, had been left practically penniless, asking for relief, but this had to be refused, as their husbands had not been members of the society. An application for relief was received from the widow of one of the members on behalf of herself and five orphans; her late husband had paid in subscriptions £16 16s. The court voted a grant at the rate of £50 per annum for the widow and £20 per annum for each orphan, making a total grant of £150 per annum. In addition, the widow will probably receive at Christmas £10, and each orphan £3, bringing the total amount she will receive from the society up to £175 per annum. A more striking example of the advantages of joining the society can hardly be shown.

The directors would bring to the notice of the members of the medical profession, especially the younger, the advantages of joining the society. Membership is open to any registered practitioner who at the time of his election is resident within a twenty mile radius from Charing Cross. Should any member remove beyond the limits of the society he nevertheless continues to be a member. The annual subscription is two guineas; every member who has paid this sum for twenty-five years becomes a member for life. Life membership may also be obtained by the payment of one sum, varying with the age of the applicant.

Further particulars and application forms may be obtained from the Secretary at the offices of the society, 11, Chandos Street, Cavendish Square, W.

The acting treasurer, Dr. F. de Havilland Hall, reported that the society would shortly benefit under the will of the late Mr. James Brickwell to the extent of over £36,000. Mr. Brickwell was elected a member in 1833 and died in 1893. By his will he made the society his residuary legatee, his son, however, having a life interest in the money.

A RADIUM hospital has recently been established in Tokio under the direction of Dr. K. Watanabe, formerly Surgeon-Lieutenant-Colonel in the Japanese Army.

THE German society for the prevention of venereal diseases will hold its annual meeting this year on June 20th and 21st at Breslau, on the occasion of the centenary exhibition there. The programme includes a number of important questions of wide interest. Dr. Julian Marcuse and Professor Blaschko will present reports introductory to a discussion on venereal diseases and social problems. Professor J. Heller will deliver an address on venereal diseases and the right to marry. Dr. Chotzen will present a report on the action taken by the society in regard to instruction in sexual matters. The discussion will turn largely on the expediency of further action in this direction being taken by the society.

THE REPORT OF THE ROYAL COMMISSION IN REFERENCE TO MEDICAL TEACHING IN LONDON.

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I.

REGRET has been expressed that there was not included among the Commissioners a medical man, preferably a London graduate, who should be acquainted at first hand with the conditions of medical education in London. Such an inclusion would, however, have been in contradiction to the spirit underlying the appointment of the Commission. Its labours included the consideration of the teaching of arts, science, and engineering, as well as of medicine. No teacher of these subjects or engineer was included, the Commission being made up entirely of administrators and business men (with one judge)—that is to say, of men whose life business it has been to act or to devise policies after taking the opinion of experts on the different problems involved. It would have been hard, therefore, to make an exception in favour of medicine, and still more difficult to choose a representative medical man who, though interested in the matter, had taken no side in the interminable discussions which have occurred during the last twenty years of the University. The advantage of having no such man on the Commission is that the Commissioners have come to the burning questions which have divided medical opinion in London—for example, the concentration of preliminary and early medical studies—with an entirely open mind. As a result they have left some of them entirely on one side and have indicated new policies, which may indeed not satisfy any particular party in the University, but represent, at any rate, an unbiassed attempt to create a London Medical School which shall be second to none in the world. It behoves every medical teacher, therefore, to try and approach the recommendations of the Commission with an equally open mind, and to ask himself whether, although his pet scheme is not advocated, the actual recommendations may not be, if not in his opinion equally effective, yet a considerable advance on present conditions, and whether they may not contain the possibilities of a right development in the future.

The recommendations in the Report fall under two headings:

1. In the first place suggestions are framed which will enable the work of medical education in London to go on with the present machinery, while removing many of the hindrances which medical schools have experienced in their work.

2. In the second place, a plan is sketched out by which the new University, when it is constituted, may establish, either *de novo* or preferably out of the present machinery, a University Faculty of Medicine under the control of the University and with full control of academic matters affecting medicine, which, while preserving all the advantages of the present English system of medical training, may provide, as has never yet been done, for the carrying out of the other function of a university—namely, the *advancement* of learning. This act of creation cannot, however, be immediate, since it awaits the formation of a new university by Act of Parliament, and in all probability also the voluntary sacrifice of autonomy on the part of one or more of the present medical schools. It will be convenient, therefore, to deal first with the situation which will present itself directly the new University is constituted.

THE PRESENT MEDICAL FACULTY.

At the present time the Medical Faculty is a large unwieldy body composed of practically all the teachers in the London Medical Schools. It has no powers except the election of three representatives on the Senate, representatives who as soon as they enter on their duties find themselves enmeshed in a great cobweb of red tape which renders them practically powerless for good or for evil. The Faculty has no power to appoint Boards of Studies, to propose the curricula, and to nominate examiners. The proposals of the Boards of Studies are subject to alteration and amendment by the Senate, and have to be approved both by the Academic Council and by the Council for External Students. No change in the curricula has any chance of approval unless it is equally adapted to the needs of London students and students in the provinces.

THE PROPOSED BOARD OF MEDICAL STUDIES.

In the scheme proposed by the Commissioners the Senate becomes a small body of men occupied with finance and general policy, who will therefore not interfere in academic and professional questions. All the present Medical Schools will be continued as Schools of the University, and their teachers, who at present form the Faculty of Medicine, will lose this name and be entitled the "Board of Medical Studies." This Board will have power to appoint any committees it may wish, and these committees will play the part at present appertaining to the Boards of Studies. These committees, however, will be appointed by the body of medical teachers, and will have to report to this body before any recommendation is sent up to the Senate. The Board of Medical Studies can determine also what committees it is advantageous to appoint. It will directly or through its committees draw up curricula, nominate examiners, and determine conditions of the examinations. The examinations, as now, will be general, but open and common only to students in the London Schools, the external student in the Faculty of Medicine being abolished.

There is apparently no suggestion to interfere with the present grants of the Board of Education to the London Medical Schools, and it is to be presumed that these grants, as now, will continue to be awarded on the amount of professional training of sufficient quality which is given in the schools.

These changes are none of them very revolutionary, but are improvements on present conditions, and probably represent a large part of what would be regarded as desirable by those teachers who are strongly attached to the principle of autonomy of the separate schools.

EARLY EDUCATION.

More fundamental proposals are made with regard to the studies and examinations which are antecedent to the professional curriculum. It has long been felt that one of the chief bars to any increase in the number of medical students in London taking a university degree has been the exclusive character of the matriculation examination. In its older form, with a number of compulsory subjects, it might have served as a test of a good secondary education; but, owing to the fact that only a small number of schools regulated their courses of studies in accordance with the requirements of the London University, most boys who wished to take a London degree had after, or just before, leaving school to take special classes, or go to crammers to be prepared for this examination. Changes which have been introduced into the examination during the last ten years have, indeed, rendered it easier, but have robbed it of most of its value as an incentive to a properly balanced secondary education.

The Commissioners regard the whole examination as a mistake, and propose that admission to the University should be determined on the basis of a school examination, which should be passed by the scholars in all secondary schools of the country at about 16 or 17. The examination will probably be under the general supervision of the Board of Education, acting in concert with the local university, and with the school teachers, and will be based on the school curriculum. If this school-leaving examination is made a necessary requisite for entrance to all professions, as is the case with the Abiturienten examination in Germany, every medical student in the country will finally be qualified to pass to a degree in the University of London. Until such action is taken by the Board of Education it would seem that some examination like the present matriculation must be continued by the University. But it does not appear likely that the newly constituted University will place the captious difficulties in the way of recognizing the entrance examinations of other universities as has been the case with the present University.

Education in the Preliminary Sciences.

The proposals of the Commissioners with regard to the preliminary scientific education and examination are more revolutionary, or, at any rate, unexpected, and suffer from the objection that, however desirable they may be in themselves, many years must probably elapse before they can come into effect to any large extent or influence any considerable majority of the London students. The Commissioners adopt the view which has long been maintained by the Royal Colleges, namely, that preliminary science should be learnt during the school years. They therefore recommend that a *senior* school examination be held in all secondary schools, more specialized than the examination mentioned above, and varying in type according to the subsequent aims of the pupil. In the case of the pupils who propose to proceed to medicine this examination will include physics, chemistry, and biology, and should be passed by the pupil about the age of 18, so that the last one and a half to two years at school will be spent in the study of these subjects. Until this examination is not only instituted but becomes general, the University will have to continue its Preliminary Scientific examination, and not until this examination is passed can a student enter the University as a student of medicine. Probably the nature of this examination, and the method of holding it will be largely influenced by the representations of the Board of Medical Studies, that is, the body corresponding to the present Medical Faculty. But it is a weak point in the Report that no clear account is given of the long transition period which must elapse before the recommendations can become effective, and it would seem that the Medical Schools may have to provide teaching for the subjects of this examination for a considerable time to come. The Report draws attention to the greater difficulty of teaching biology in schools as compared with physics and chemistry. The changes recommended by the Commissioners would be certainly easier to bring about if this subject were dropped for the Preliminary Science examination and the training in general biological principles transferred to the teachers of anatomy and physiology in the Medical Schools. Such a change would meet with the approval of many of the teachers of the professional subjects, but it is not clear from the Report that any such change is contemplated by the Commissioners. Certainly most Medical Schools would feel it a relief to receive the students already well grounded in the elements of general science by a two years' course of physics and chemistry taken while they are still under school discipline and during their most receptive years.

The Nature and Functions of University Education.

These proposals, however, do not make a University Faculty of Medicine, they simply provide for an improvement in the examinational test of knowledge acquired at a number of hospital schools, and ensure some correlation between the examinations and the average teaching carried out in the different schools.

The fundamental idea underlying the present Report is that university teaching can be given only by men who are actively and systematically engaged in the advancement of knowledge in the subject they teach. It is the association of such men which forms the university and creates an atmosphere in which the student not only learns to earn his living but acquires also the training of mind which will fit him to take part in or to avail himself of every advance in the knowledge of his subject. "He learns to weigh evidence, to follow and criticize argument, and put his own value on authorities."

Hitherto there has been no means of organizing either teaching or research with a single eye to the interests of medicine as a whole. It was these considerations which led the last two Royal Commissions to advocate the concentration of preliminary and early medical studies in university institutions, so that London men should have the advantage, at present enjoyed by Oxford and Cambridge students, of a university training during the first three years of their medical course, and the institutions, being under the direction of professors appointed by the University, could have been freed from the hampering effect on their education which is at present exercised by the system of external examinations.

In the last University Commission the subjects of pathology and hygiene were grouped with those of the intermediate studies, anatomy, physiology, and pharmacology. Until recently no one has ventured to suggest that the professional subjects of medicine, surgery, and gynaecology were equally susceptible of treatment as subjects in a university curriculum, or that the university spirit was as necessary in the pursuit of these studies as in that of physiology and anatomy. We have been apparently so deeply impressed by the system in which we have been brought up, derived from the century-old method of apprenticeship, that we have regarded the main object of medical education in the later years of the curriculum as a training in a craft. As Mr. Flexner rather unkindly says, "Such medical teaching regards itself as preparing the student to be a higher sort of artisan." Curiously enough this attitude of mind is peculiar to England, and its long survival and its strength at the present day are probably due to the first-rate quality of the technical training which is given, especially in London, and to the high personal character of the men who are responsible for the training. But its effect on the advance of medicine and surgery in this country can only be regarded as disastrous. In the advances of the last twenty years our clinical teachers have taken little part. The English schools of physiology and pathology, and of tropical diseases, have acquired a high reputation in the civilized world, but reference to the authorities quoted in any textbook of medicine shows that, with but a few honourable exceptions, the recent advances in the science of medicine, when not due to pathologists or physiologists, are accredited to some foreign school. Nor are our clinical teachers to be blamed for this condition. Many, perhaps most of them, take up medicine or surgery from a love of the subject, and the question of professional success—that is, the acquisition of a large practice—may be at first an entirely subordinate consideration. But it has to be taken into account that at the present time "there is no place in the sun" for the man who would give his life to medicine or surgery. Unless he has a considerable private income he must practise or starve. Nor are the chances of advancement in his profession determined by his powers and work as an original investigator. It is more important that he should work for the school to which he is attached than for the subject which he professes. It is twenty years since I was told authoritatively that "a medical school is not the place for research," and since that time conditions have altered considerably, but even now organized research is regarded as something fitting for the scientific teachers in the school rather than for the clinical teachers attached to the hospital staff.

The complete lack in London of teaching of university rank in the professional subjects of the medical curriculum was brought clearly before the Commission by Flexner, not only in evidence, but also in his reports to the Carnegie Institute on the conditions of medical education in the States, Canada, Germany, and France, as well as in this country. If a real University Faculty of Medicine is to be created in London it must be made possible, in Flexner's words, "to import into London the scientific producing clinician—devoted to teaching and research—from any place in which he may be found; and younger men must be taught that their chances of higher appointment depend, not on using themselves up in tutorial coaching, not on faithfully stepping into the breach when the superior is absent nor following in his footsteps when he is present, but on the development of their own powers along genuinely productive lines. . . . The first step in the direction of modernizing medical education would appear to lie in the total conversion of an existing school or in the creation in London of a new school, the clinical Faculty being selected upon precisely the same lines as the scientific Faculty, the entire body of teachers animated by one ideal and working as an organic unit towards a single end. The clinician's relation to the hospital must reproduce the chemist's relation to his laboratory."

University Colleges of Medicine.

Evidence to somewhat the same effect was given before the Commission by Sir William Osler, by Dr. Head, and, with reservations, by the staffs of St. Bartholomew's and of the London Hospitals, with the result that the Commissioners have been convinced of the feasibility of creating a University School of Medicine in London which

will include all subjects of professional study, and which will conform to the ideals of a university which are generally accepted for the Faculties of Arts, Science, and Technology. The Commissioners therefore propose that, as in the other Faculties, one, two, or three University Constituent Colleges of Medicine be instituted in connexion with hospitals. In these colleges the financial and academic control of the schools must be in the hands of the University, the local management of each being carried out by a delegacy appointed by the Senate of the University. Each of these Colleges will include departments representing *all* the subjects of the medical curriculum subsequent to the Preliminary Scientific examination. Only University students, that is, those who are qualified for registration as matriculated students in the University, will be admitted to these Colleges, but it must be remembered that most students of Oxford and Cambridge, and probably of other universities, will be capable of being so registered. All the teachers in the Colleges will finally be appointed by the University, using the mechanism of Boards of Advisors as at present, as professors, associate professors, or readers. The "Faculty of Medicine" of the University will be composed of these teachers appointed by the University. Since these teachers will be selected and appointed by the University, they will be trusted to develop their teaching along their own lines, and to determine—subject to the general approval of the whole Faculty, and in the qualifying examinations to inspection by the General Medical Council—the nature and extent of the examinational tests to be applied. It is laid down, however, that assessors must be appointed to aid the professors in their public examinations.

It will be noted that the Commissioners thus accept the argument insisted on during the concentration discussion of a few years ago, especially by the teachers of the Medical Schools of London and Guy's, as to the great advantages connected with the close association of all subjects in the medical curriculum, intermediate and advanced, in the same educational institute. By throwing over "concentration," however, the Commissioners have had to abandon a principle on which much stress was laid by the advocates of concentration and of which they themselves approve in the early part of their Report —namely, the advantage to the student of an education in an institution where many Faculties are represented, so that he can broaden his mind in directions other than the immediate subjects of his studies. Both advantages are real ones, and I am inclined to think that if choice has to be made between them the Commissioners have taken the right course. Moreover, it is possible that the mixture of students of many Faculties may be effected to a considerable extent by the institution of hostels connected with the University rather than with any given College or School, whether of one or more Faculties of the University.

The most important innovation in this scheme, and the one which promises most for the advancement of medicine in this country, is the recommendation that University professors shall be appointed to deal with the clinical subjects. These professors are to have charge of wards and of laboratories attached to the wards. They will have a number of paid whole-time assistants, in addition probably to half-time unpaid assistants. They will have charge of an out-patient department connected with their wards. They will receive a salary of £1,000 to £1,500 a year, and will be expected to devote all their heart and the greater part of their time to the work of teaching and research in their department. They will, however, be allowed a certain limited amount of private practice—for example, two or three afternoons a week.

There is no question that these proposals of the Commissioners will meet with much criticism. Mediocrity is certain to be up in arms at the institution of any system which promises to pick out and place in a superior position the talented, the enthusiast, or the man of genius. But it must be distinctly pointed out that no proposal is made to abolish the present system of clinical teaching in London —namely, teaching by appointments. All the witnesses examined before the Commission were unanimous on the advantages of this system; and Flexner in his book on *Medical Education in Europe* expressly shows that the great lack in German medical education is some system like this, in which students obtain direct access to the patients during the whole of their professional studies. There is no doubt that in London the art of medicine and surgery is taught to the ordinary student better than anywhere else. This system, however, will not be any the worse for having added to it instruction by skilled teachers who are giving their life to their subject instead of by men in active practice who can spare a few hours a week for their hospital wards, but have no time either to carry out investigations for themselves or even to keep themselves abreast of the modern developments of science.

At the present time it is the training rather than the teaching which is the strong point of the London schools. The most important teaching that a medical student in London gets he receives from himself and from his fellow students, especially those holding senior appointments, as he passes through the various positions in the hospital with their graded responsibility. Much of the teaching by the staff is recognized by the students themselves as out of date. The actual instruction imparted in a school is largely directed to passing the students through their examinations, the most sterile form of instruction possible, since knowledge gained solely in preparation for an examination is apt to be thrown away and be lost a very short time after the examination is passed. In a real University the passing of the examination is not the end of the training, and should hardly bulk at all in the mind of the student. The whole aim of his education should be to fit him for his future work, to render him mentally alert and resourceful, keen to avail himself of the advance of knowledge, and prepared by scientific training to distinguish the true from the merely specious among the various modifications in the theory and practice of medicine which are being continually brought before the public.

The recommendation of the Commission that a certain limited amount of private practice should be allowed to clinical teachers will hardly count as an attraction to the right kind of men for the post, but it will be useful in furnishing a bridge by which a professor who is tiring of his earlier aims, or losing his enthusiasm and is beginning to be attracted by the more lucrative rewards of practice, may be enabled to give up his post and devote himself entirely to practice, his place being taken by some younger man with his enthusiasm for medicine and medical research still hot upon him. In this way a constant succession of the right class of man should be assured, and it must be remembered that these men will be drawn not from any given Medical School or College, but from the whole Empire.

FINANCIAL.

It is evident that no step can be taken in the creation of a Medical College or Colleges of this type until the new University is established. The Report suggests that one, two, or three of the existing medical schools might be taken over by the University. In each such Medical School the buildings and funds available for medical education should be vested in the University and be administered by a delegacy appointed by the University.

Suggestions are made in the Report for the manner in which adequate arrangements might be made between the University and the hospital with regard to the use of the wards for teaching, but this I need not go into.

It is calculated that in a School with an annual entry of about seventy students the income from fees, endowments, and grants from the Board of Education would amount to about £12,000 to £15,000, and would be sufficient for the requirements of the departments of Anatomy, Physiology, Pharmacology, and Pathology. To this the University would have to add another £12,000 for the service of the three units of clinical study—medicine, surgery, and gynaecology. Additional provision would have to be made, either in the school or elsewhere, for the special departments of clinical study, which would require further expense. Thus the University would have to be founded and provided with funds before it could carry out the negotiations necessary for the conversion of one of the present Medical Schools into a constituent College of the University. It is impossible at present to say which, if any, of the schools would be willing to accept the terms suggested. Although the School itself would gain enormously in prestige and usefulness, considerable sacrifice

would be required from the individual members of the present staffs; for the change would mean not only the sacrifice of their present autonomy and patronage, but also the admission of a new order of men who would be academically, though not necessarily professionally, of a higher grade than the present clinical teachers.

The change would also involve the transference of the whole future of the School into the power of a new and unknown body, and necessitates, therefore, considerable faith in the adequacy of the statutes made for the government of the new University, and in the quality of the men selected in the first place as members of the Senate.

It would be impossible, for instance, to imagine any Medical School daring to entrust its fortunes to the guidance of the present Senate.

I believe, however, that the principles laid down in the Report will be found adequate, and that if the right men are chosen by Government to guide the fortunes of the new University through the first six years of its life, there is a prospect of having after these seventy-five years of struggle a University worthy of London and a Medical School in the University inferior to none.

Those who oppose these changes will have to show that their opposition is really based on a consideration for the welfare of medicine and the medical sciences, and is not directed by a regard for the private interests of themselves or their Schools. The Report points out that the public are alive to the fact that hospitals founded and supported by charity should be used to the fullest extent for medical education and the advancement of medical science. If hospitals "are required for a University Faculty of Medicine in London which has no end in view but medical education and the advancement of medical science, the public interest must be considered, and the question of the privilege of access to the great London hospitals cannot be treated as a matter of private right, or decided as if they were the private property of the existing Medical Schools."

SPECIALISM IN THE GENERAL HOSPITAL.

THE Phipps Psychiatric Clinic in connexion with the Johns Hopkins Hospital, Baltimore, was opened with the customary ritual of "exercises," speeches, and banqueting on April 16th.

It owes its establishment to the liberality of Mr. Henry Phipps of New York, who some years ago gave a large sum to Johns Hopkins in furtherance of the knowledge of tuberculosis. The cost of the building of the Psychiatric Clinic is estimated at £200,000, and Mr. Phipps has further undertaken to provide for its maintenance during the next ten years and has endowed a professorship. The director is Dr. Adolf Meyer, who during the last three years has been engaged in organizing the clinic, which is now ready for the reception of patients; his staff will consist of ten physicians and some fifty nurses.

Of the addresses delivered at the opening of the new foundation, the most notable was that of Sir William Osler, who discoursed on specialism in the general hospital. He said that, although in 1889 the Johns Hopkins Hospital seemed to many the last word in hospital construction, year by year since then new departments had been added, new lecture rooms, operating rooms, laboratories, and so forth. He recalled the fact that in the address delivered by him when he was leaving Johns Hopkins in 1904 he spoke of the need of special departments, expressing the hope that within twenty-five years they would have a psychopathic institute, a children's hospital, a genito-urinary clinic, and a special building for diseases of the eye, ear, and throat. Two of these were already in existence—the department for sick children, and now the psychopathic institute. Money had been furnished for the new genito-urinary clinic. Others would follow rapidly, and it was safe to say that within a dozen years there would be as many special departments, semi-independent units in a great organization. Each of these units was a place where sufferers received the best skilled help that could be given; each was a place where students were taught, and each was also a centre of study and research. Each unit represented a technical school linked to the university by the Medical Faculty. They differed from the more purely scientific departments of the medical school in one important particular. The hospital units minted for current use in the community the gold wrought by the miners of science. That was their first function. "Only a cold-hearted, apathetic, phlegmatic, batrachian, white-livered generation, with blood congealed in the cold storage of commercialism, could not recognize the enormous debt which we owe to these self-sacrificing miners of science; and yet there are to-day sons of Belial, brothers of Schimei, daughters of Jezebel, direct descendants of the scribes, pharisees and hypocrites in the time of Christ, who maligned these prophets and wise men, winners in a fight for humanity, unparalleled in the annals of the human race." Dealing more particularly with the new institute, Sir William Osler went on to say that the progress in the rational treatment of insanity was a bright chapter in the history of the past century. On the other hand one of the tragedies of the subject had been its dissociation from centres of active professional and university life. A department of medicine with the closest affiliation with the life of the community had been segregated and stamped with a taboo of a peculiarly offensive character. At Johns Hopkins it would take its proper place as a unit in the work of the medical school of the university. A new atmosphere would be diffused, a new group of energy and activity would come into the hospital which could not but be helpful. The medical student, living as he did in close fellowship with the hospital staff, would be influenced in this way by the very presence of the institute. It was to be hoped that time might be found for general instruction of the senior students in the elements of neuro-psychology. To a large class outside the institute it should prove immensely beneficial. He estimated that there must be a thousand or more assistants in the asylums of the United States whose pineal glands were not yet crystallized, and who should find there inspiration and help. He expressed the hope that room would be found for the general practitioner, through whom more than any other group the benefits of the institute would be distributed. The doctor in general practice needed enlightenment as to the vast importance of early deviations from normal mental states, instruction in new methods of diagnosis and treatment, and encouragement to feel that in the great fight for sanity in the community he was the man behind the guns. Men talked a great deal about the human mind, and when cornered quoted Hamlet to cover an unpleasant ignorance of its true nature. The modern student, like the ancient, took his stand either with Plato and compared the mind and brain to a player with his musical instrument, or with Lucretius to a musical box wound up for so many years to play so many tunes. Modern authorities leaned to one or other of these views. Three things they did know: Departures from normal mental states were extraordinarily common; they were the most distressing of all human ills, and they should be studied systematically by experts with a view to their prevention and cure. A widespread feeling had arisen that the hygiene of the mind was just as important as the hygiene of the body, that they must return to the Greek ideal of the fair mind in a fair body. He was afraid several generations must pass before they saw any practical result of the present active eugenic crusade. But there was an immense and hopeful work to be done in educating parents in training-stable methods. The orator expressed his confidence that the psychopathic institute would play its part in the national campaign of prevention of mental ill health through education, a campaign as important to the public as the great struggles against tuberculosis and infant mortality. It would be helpful, too, to study in a sane, sober, and sympathetic way epidemics of mental, moral, and even economic folly as they swept over the country. The present outbreak had not been equalled since the capture of the Roman world by oriental cults. The same old-fashioned credulity existed that enabled Mithras and Isis, Apollonius and Alexander, to flourish then as the new cults did to-day, and for the same reason. There was still potency in the protoplasm out of which arose in primitive man magic, religion, and medicine. So recent was the control of the forces of Nature that even in the most civilized countries man had not yet adjusted himself to the new conditions, and stood only half awake rubbing his eyes outside Eden. Still in the thaumaturgic state of mental development 99 per cent. of their fellow creatures when in trouble, sorrow, or sickness, trusted to charms,

incantations, and the saints. Many a shrine had more followers than Pasteur, many a saint more believers than Lister. Mentally the race was still in leading strings, and in the childhood of the world they could not expect people yet to put away childish things. These were some of the hopes that filled their hearts as they thought of the future of the new department.

Dr. W. H. Welch delivered an address, in which he said that Mr. Phipps wished the clinic to be for the "ameliorated treatment of the insane." There had been no branch more in need of close association with the medical school and hospital than psychiatry. The general practitioner as a rule lacked opportunities for study and investigation in this line of medicine.

Dr. Stewart Paton, of Princeton, in a speech on the clinic and the community, said that institutions of that kind were intended for the study of man on broad biological grounds. The patients presented themselves for treatment as victims of imperfect adjustment to life's problems. That clinic should be considered an important link among many other links—the home, the school, the university, and others.

Dr. Mott paid a warm tribute to the value of the new clinic, which he said was one of the most prominent, if not the leading, institution of its kind in the world.

Dr. Meyer pointed out that the institution had a great educational value, and should aid in bettering civic conditions. Now that the North and South Pole had been found, it was time for the public to take an increased interest in exploring the great field of the nature and function of the brain.

Three hundred and fifty guests, some of them of world-wide fame, sat down to the ceremonial banquet in the evening. Dr. William H. Welch was in the chair. Among those present were Sir William Osler, Dr. F. W. Mott, and Dr. William McDougall of Oxford, besides many American leaders in psychiatry and neurology.

THE BIOLOGICAL PROPERTIES OF MILK.*

In the report of Dr. Janet E. Lane-Claypon to the Local Government Board the biological characters of human and cow's milk are considered largely from the standpoint of infant feeding, and an extensive literature on this subject comes under review. The subject is considered under two main headings:

(*a*) The ferments in milk and their mode of action.
(*b*) Those protective substances in milk similar to the bodies found in normal or immune serums which play a part in immunity.

The literature dealing with the individual substances is passed in review and the present position of knowledge considered.

The report should appeal both to the research worker and to all dealing with the questions of infant feeding and public health; for although the value to the infant of the substances reviewed would not appear to be great, to reach this conclusion has required an amount of critical reading and research on the part of Dr. Lane-Claypon not possible to many who are interested in all phases of the milk problem. Unfortunately, many of the earlier workers did not sufficiently realize the importance of employing only sterile milk, and hence it is not surprising to find that several of the enzymes originally stated to be present in milk are really derived from bacterial contamination.

Oxidizing Ferments.

The enzymes which receive most attention in the report are the oxidizing and reducing ferments and catalase. With regard to the former it was at first considered that two enzymes were concerned, one, an oxidase, giving a direct action; the second, a peroxidase, acting only in the presence of a peroxide, such as hydrogen peroxide. More recently, however, it has been shown (Moore and Whitley, Bach, and others) that the first of these is not an enzyme but a peroxide, so that only one enzyme need be considered—namely, the peroxidase; a direct action merely indicates that a peroxide is already present. In using the peroxidase reaction as a test for boiled milk it must of course be remembered that the addition of a small quantity of raw milk to a boiled sample will again make the test positive. In order to overcome this difficulty attempts have been made by Van Eck and others with a certain amount of success to carry out the test in a quantitative manner. Peroxidase appears to be always present in cow's milk, even when this is entirely free from bacteria. The enzyme can be precipitated from the whey by saturation with ammonium sulphate, and is probably associated with the lactalbumin. It is destroyed by heating to a temperature of about 75°.

In human milk its presence is less certain; it is, however, nearly always found in colostrum, and also in inflammatory conditions, such as mastitis. It would, therefore, appear to be derived from cellular elements, such as the leucocytes. The mechanism of the peroxidase reaction is not fully understood, but it seems likely that it depends on the presence in the milk of small quantities of metals or metallic salts in the colloidal state. This theory receives support from the work of Sarthou, who has shown that very minute traces of colloidal iron and manganese—two metals almost always present in milk—can bring about the reaction.

Reducing Ferments.

Passing next to reducing ferments, we have again to consider a direct and indirect action. The reagent usually employed to detect reducing enzymes is a solution of methylene blue, either alone or with the addition of formaldehyde (Schardinger's reagent). The work reviewed shows quite conclusively that milk free from bacteria does not reduce methylene blue alone—that is to say, the direct action, when it occurs, is due to bacterial contamination. It has even been suggested (Bartel) that this reaction might be used as a test for contamination. With Schardinger's reagent, on the other hand, reduction is brought about by cow's milk, even when sterile, though not by human milk, which contains, therefore, no reducing ferments. The mechanism of this reaction has received much attention from Bach, and an interesting review of this worker's chief results is given in the report. Bach suggests the name "perhydridase" for the enzyme acting in the presence of formaldehyde, and considers that its action is analogous to that of the metallic sols, which have been shown by Bredig and Sommer to possess similar properties. He thinks that scission of the water by the oxidizable substance (formaldehyde) takes place under the influence of the enzyme, which then forms a strongly reducing compound with the hydrogen. At the same time Bach calls attention to the analogy between the action of perhydridase and of peroxidase, which is indicated by the following equations:

$$\text{Peroxidase} + H_2O = O \text{ (peroxidase reaction)}$$
$$\text{Perhydridase} + H_2O = 2\,H \text{ (Schardinger reaction)}$$

Prolonged boiling of milk also leads to an increased reducing action, but this is probably due simply to the formation of reducing bodies in the process of boiling and cannot be caused by ferment action.

Catalase, the enzyme which destroys H_2O_2, appears to be nearly always present in cow's milk even when sterile. It is, however, much increased by bacterial contamination, many organisms such as *B. pyocyaneus*, *Proteus vulgaris*, and *Oidium lactis* being able to produce this ferment. The catalase reaction has, therefore, been suggested as a means of measuring the degree of contamination and several forms of apparatus have been devised for this purpose. In this connexion, however, it is pointed out that Schroeter found no connexion between the amount of oxygen evolved from H_2O_2 and the bacterial count, and hence it is obvious that the test cannot be applied in a very stringent manner. Catalase is usually present in human milk, but the amount is extremely variable. It is more plentiful in colostrum, and is also increased as a rule in ill health or where the gland is acting badly.

Other Enzymes.

The other enzymes have received very much less attention, but it would appear that sterile milk contains neither proteolytic nor lipolytic ferments, while the presence of

* Reports to the Local Government Board on Public Health and Medical Subjects. New Series, No. 76. Report to the Local Government Board upon the "Biological Properties" of Milk, both of the Human Species and of Cows, considered in Special Relation to the Feeding of Infants. By Janet E. Lane-Claypon, M.D., D.Sc.Lond.

lactase is doubtful. Amylase, however, is present in small quantities both in human and cow's milk, and it is interesting to find that, according to most observers, the hydrolysis of starch proceeds no further than to dextrin. It is difficult to see what use such a limited action could be, and further experiments are desirable to examine the correctness of this view.

Action of the Enzymes in Milk.

The enzymes usually present in fresh human milk are therefore catalase, amylase, and peroxidase, while cow's milk contains in addition perhydridase. A considerable amount of evidence is, however, brought forward to show that the presence in the milk of these ferments can be of little biological value to the infant. Peroxidase, for example, is rapidly destroyed by acid, and would therefore be inactivated on reaching the stomach, while amylase is already present in the saliva of newly born infants, and hence cannot be required in the milk. These ferments are probably derived for the most part from the blood, and their presence in the milk is therefore probably more or less accidental.

Protective Substances.

The protective substances dealt with in the report are such as have been directly demonstrated in the milk or have been investigated from the standpoint of infant feeding.

As to *complement* in milk, the work up to date has been carried out largely by the use of the haemolytic test. The chief points of interest elucidated are that complement is present in cow's milk in the colostral period, but that later it is absent or the quantity is so small as to be negligible. Some evidence, however, has been brought forward to show that it becomes substantial in amount in early mastitis. The complement of human milk requires a sensitive system for its demonstration.

Haemolytic amboceptor is found in normal cow's milk only in the early colostral period, and apparently not later. Bulloch was also able to demonstrate *specific amboceptor* in the milk of immunized rabbits. The results which have been obtained with haemolytic amboceptors probably indicate the type of behaviour of other specific immune bodies in the case of milk.

Bactericidal substances have been investigated by considering the growth of the organisms found in milk itself, and also the growth of organisms added to approximately sterile milk, the samples being kept at different temperatures. The growth was determined by plating out samples of the milk at stated intervals. The results of this method have been attacked by Rosenau and McCoy, and others who account for the apparent inhibition or bactericidal effect by agglutination. They have shown that slight traces of serum added to boiled milk produce the same effect; further, by breaking up the clumps of bacteria in fresh milk and counting, they proved that the inhibition was apparent rather than real. The work of Bub on this subject supports the contention of Rosenau and McCoy. Inhibitory and bactericidal action against *B. coli*, *B. typhosus*, *B. pyocyaneus*, *V. cholerae*, and the organisms found in ordinary milk, have for long been attributed to fresh milk, but most of the work on this subject requires repetition of the experiments under conditions which avoid the errors introduced by agglutination.

The *precipitins* in milk seem to have received little study. The account of Langer's work in this connexion is not stated in very clear terms.

The *agglutinins* of milk have already been noted as complicating and vitiating many of the experiments on the bactericidal properties of milk. The natural agglutinins are present in greater quantities in colostrum. It has been shown, however, that artificial agglutinins also pass out into the milk, and diphtheria antitoxin behaves in a similar way.

The general conclusion is that if specific immune substances are present in the blood of the mother they will pass out in small amount into the milk, in which they are present in the whey.

The value of protective bodies in the milk to the infant largely depends on whether they can be absorbed into the blood stream. The effect of digestion on these protective bodies is discussed. Complement appears to be destroyed in the stomach in the course of a few minutes, but the work of Ehrlich, Römer, Hamburger, and others shows clearly that some passive immunity can be conferred on the young of the species by the *milk* of a protected mother. The question as to the absorption of foreign protein through the mucous membrane of the infant's alimentary tract is discussed at great length, and much evidence adduced to show that it can be absorbed during the first few days of life, but in the case of the homologous whey proteins it appears possible that the absorption can go on for a longer period. Disturbance of the alimentary canal and excess of protein may also result in absorption of foreign protein in older animals. Specific agglutinin, according to the work of various observers, is not absorbed from the intestinal tract of sucklings, but apparently the subject has not been studied in the very young. The mouth feeding of young animals with dead vaccines, however, gives rise to marked formation of agglutinins in the serum.

The type of feeding seems to have some effect on the antibody content of the serum of infants. Pfaundler and his school have shown that the complement content of the serum at birth is high, that it falls after birth, and rises subsequently at a rate depending on the character of the infant's food. There seems some evidence to show that amboceptor for sheep's red cells, which is a normal constituent of human blood, appears earlier in the case of infants artificially fed than in those which are breast-fed. It has been suggested that this difference is due to infection, but the point has not yet been decided.

Finally, in a short addendum to the report, attention is called to the recent work of Schaumann and Funk on beri-beri,[1] and the bearing of this on the question of infantile scurvy is discussed.

Conclusion.

Dr. Lane-Claypon's main conclusion alone remains to be considered, and this can best be given in the author's words: "The weight of evidence suggests the absence of any direct value in the biological substances *per se*, but it also most decidedly shows the paramount importance of providing breast milk for the young animal. It would seem impossible to emphasize this fact too strongly, and all those concerned in the health of infants should aim at obtaining satisfactory breast feeding for all infants during, at any rate, the early weeks of life."

INTERNATIONAL CONGRESS OF MEDICINE.

LONDON, AUGUST 6TH TO 12TH, 1913.

IN the advertisement columns of to-day's issue a list of subscribers to the International Congress of Medicine to be held in August next will be found. A further sum of £2,500, which is the minimum required to cover the necessary expenditure, is asked for. This method of appeal has been adopted in order to avoid the very large expenditure entailed by a fresh general issue of circulars to members of the profession.

The expenses of this great meeting have in this country to be met entirely by private subscription, since the actual membership fees do not more than suffice to pay for the copy of the *Transactions* supplied to each member.

It will be noted that less than 600 members of the whole profession are at present represented in the list of subscribers, and that upon many of these will fall the further expense of private entertainment of guests during the course of the meeting.

We earnestly support the request for further subscriptions. It is expected that at least 7,000 persons will attend the Congress, an estimate which is fully corroborated by the entries which have been received up to the present time, and, further, that the meeting will be fully representative of the profession in the various European countries, America, and the British dominions beyond the seas. It may be pointed out that in the matter of private hospitality the executive will receive support from His Majesty King George, and from many prominent men, such as Lord Strathcona, the Hon. W. F. D. Smith, and Mr. Astor, as well as from the medical corporations and some of the City Livery Companies, and that the subscriptions asked for will be mainly

[1] BRITISH MEDICAL JOURNAL, April 5th, 1913, p. 722.

devoted to the scientific objects of the meeting. As the Congress is an international engagement, the larger the number of the names which appear upon the list, independently of the amount subscribed, the greater will be the compliment to our colleagues from abroad and from the Dominions who are visiting us upon this occasion.

Subscriptions may be sent to the Treasurer, International Congress of Medicine, 13, Hinde Street, London, W.

SECTION II.

Physiology.

The President of this Section is Professor E. A. Schäfer of Edinburgh; the Vice-Presidents, Professors Brodie, Gotch, L. E. Hill, McKendrick, Sherrington, Starling, Stirling, and Waller. The Secretaries are Dr. Edkins and Professors Halliburton, Noel Paton, and W. H. Thompson.

The number of set discussions is three; the one which appears to be exciting most interest, to judge by the number of those wishing to take part in it, is that on Internal secretions, which will be held jointly with the Section of Medicine. The Reporters in this discussion—Professor Gley of Paris and Professor Biedl of Strassburg—have been nominated by the physiologists. To introduce this subject a discussion on Endogenous protein metabolism, to be held in conjunction with the Subsection of Chemical Pathology, will be introduced by Professor Abderhalden, Dr. H. D. Dakin, and Professor G. Embden. The third discussion will be confined to the Section of Physiology, and will deal with the question of Reciprocal innervation: it will be introduced by Professors Sherrington and Max Verworn.

Perhaps the most interesting meetings of this Section will be three laboratory meetings, at which demonstrations will be given. These will be held in the Physiological Laboratories of the University of London, University College, London, and King's College, London, respectively. The remaining sittings of the Section will be occupied by the reading of papers; the number of titles sent in so far is not great, but they include communications from Professor Lendemann of Kiev, Professor Sivén of Helsingfors, Professor Graham Lusk, Professor N. Zuntz, and Dr. Iscovesco.

The meetings of the Section will take place in the rooms of the Physiological Laboratory, University of London.

The following is a provisional programme:

Wednesday, August 6th.—Morning: Demonstrations. Afternoon: Papers.
Thursday, August 7th.—Morning: Papers. Afternoon: Laboratory Meeting, University of London.
Friday, August 8th.—Morning: Discussion: Internal Secretions. Afternoon: Laboratory Meeting at University College followed by a Physiological Society Dinner.
Saturday, August 9th.—Morning: Papers. Afternoon: Garden Party at Professor Bayliss's.
Sunday, August 10th.—Morning: Picnic Party on the Thames.
Monday, August 11th.—Morning: Discussion: Reciprocal Innervation. Afternoon: Laboratory Meeting at King's College.
Tuesday, August 12th.—Morning: Discussion: Protein Metabolism. Afternoon: Papers.

The acting secretary is Professor W. D. Halliburton, King's College, London, to whom titles of papers and demonstrations should be forwarded without delay.

The entertainments arranged include an excursion on the Thames on the Sunday, a garden party kindly given by Dr. and Mrs. Bayliss at Hampstead, and an informal dinner given by the Physiological Society after one of the laboratory meetings.

THOSE in search of information with regard to Buxton can obtain it from a handbook recently issued. It contains a full account not only of the provisions made for the treatment of disease, but of the opportunities offered for motoring, golfing, and angling, and the enjoyment of music and picturesque scenery. There is also ample information as to hotels and lodgings. Special attention is drawn to the fact that this spa now has a winter as well as a summer and autumn season, and that during the former prices are somewhat reduced. Copies of the booklet can be obtained on application to the Bureau of Information, Buxton.

VACCINATION INQUIRY IN THE ISLE OF MAN.

SEVERAL months ago the Manx House of Keys passed a Vaccination Acts Amendment Bill, the object of which was to secure exemption from vaccination by means of a conscience clause. Before becoming law it was necessary for the bill to be submitted to the Legislative Council for consideration and adoption or rejection. The Legislative Council decided to take expert evidence and conducted an inquiry. Dr. Hadwen (Gloucester) gave evidence against vaccination on March 1st; Dr. Drury (Halifax) and three resident doctors gave evidence in favour of vaccination on March 10th. At a meeting of the Legislative Council on April 21st the subject was further discussed and the Amendment Bill was unanimously rejected.

The evidence given at the inquiry has been published in a Blue Book. Dr. Hadwen first dealt with the question from a moral and political standpoint, and urged that it was absolutely wrong for any Government to embody a medical prescription—even supposing that prescription were a right one—among its legal enactments. Whatever might have been the conditions formerly, they did not now warrant any such enforcement, because small-pox had gone the way of the black death, sleeping sickness, and the plague. This was due to sanitary improvements. The State gave no guarantee that vaccination would effect the purpose it professed to accomplish. Vaccination was a cause of injury and death. Surveying the historical aspect of vaccination, Dr. Hadwen submitted that Jenner got £30,000 for the so-called discovery (which Jenner himself had not made) without presenting one atom of solid proof of what he professed to have accomplished. The whole great system had been built up on one solitary fictitious case. The medical men of Jenner's time accepted vaccination without any evidence whatever beyond Jenner's statements. Dr. Hadwen next dealt with the statistical side of the question. After thirty years of compulsory vaccination, the small-pox deaths increased. It was not until the passing of the Public Health Act that small-pox commenced to go down. At the present time, when half the population had not been vaccinated, there was practically no small-pox. He considered the Gloucester epidemic was due to the insanitary state of Gloucester. On the south side the whole area was in an insanitary condition, and the people were living practically over a huge cesspit. The main sewer was broken in every direction. The year was exceptionally dry, and the water supply ran short. He did not know about the necessity for the introduction of small-pox virus. It was constantly being said in these days that there must be an importation of small-pox. Cases had arisen in previous years which showed no connexion whatever with one another. He did not think there was any evidence that small-pox must be caught or that it must be introduced from elsewhere. His figures regarding the Gloucester epidemic did not agree with the official figures of Dr. Coupland. He could not conceive how such blunders were made. The alleged condition of the hospital at Gloucester was described in detail by Dr. Hadwen. It was said that the wards were undermanned, the nurses mostly untrained, and the earliest cases not properly attended by a medical man for days and weeks together; "the patients must have been simply choked with filth." He was a strong antivivisectionist. He would not say that cow-pox was syphilis, but cow-pox could not be distinguished from syphilis. Dr. Hadwen repeated this statement many times. He did not believe in the germ theory of disease in any form. It had never been proved that a specific germ produced a specific disease. The percentage of unsuccessful vaccinations in the West End of London was far larger than in the East End. This led him to suppose the West End doctor vaccinated with an exceedingly light hand, because he got his fee whatever might be the result. Regarding the dangers of vaccination, even the recorded cases of death did not include all, because it stood to reason that medical men would not like to give certificates condemnatory of their own acts. The majority of the profession believed in vaccination because the medical profession were more ready than any other profession to follow the fashion of the day. The medical profession had seldom been unanimous except when it had been

unanimously wrong. With regard to the practice of vaccination the medical profession had been misled by prejudice. Most of the doctors would admit there was no science for it. He did not believe in the use of antitoxins, in antiseptic surgery, or in any of Pasteur's works. Asked if he could give the names of any men in the front rank of the profession holding the views that he did, Dr. Hadwen mentioned the names of Dr. Charles Creighton, Professor Crookshank, Sir William Collins, and Dr. Tebb. There were, he said, a good many more. There was no widespread uneasiness whatever among the profession caused by the great diminution of vaccination. No medical man troubled himself about it. The only people who were troubling themselves about it were the public vaccinators because they were losing their emoluments. He would like to see the Legislature of the Isle of Man set an example to the whole of England, and not merely grant exemption to the conscientious objector, but wipe out compulsory vaccination altogether from the island.

Dr. Drury commenced his evidence by reference to the Royal Commission on Vaccination, its constitution and conclusions. The seven conclusions in par. 377 of the final report were read and emphasized. Diagrams suspended on the walls showed "The mean annual deaths from small-pox at successive life periods per million living at each such period (1847–87), England and Wales." After the introduction of vaccination there had been an enormous fall in the deaths from small-pox at the age under 5 years. This fall commenced long before the Public Health Acts and continued after. The antivaccinator would not consider the points "when" vaccinated and "how" vaccinated in dealing with the subject. The provaccinist considered this of great importance. The witness detailed the mortality-rates from small-pox in recent epidemics at Sheffield, Dewsbury, Halifax, Bradford, and Oldham. The marked difference between the mortality in the vaccinated and unvaccinated illustrated in these and other epidemics was most significant. He did not wonder at antivaccinators talking about colossal collusion when they deal with this aspect of the subject, because the figures worked out so uniformly in one direction, and that was practically the only explanation the antivaccinators could give. It was, however, nonsense to suggest that the medical officer of one town was in collusion with another to produce a uniform set of figures. After demonstrating the effect of vaccination in reducing the liability to death, Dr. Drury proceeded to show how vaccination effected a mitigation of small-pox in persons vaccinated long before. A table calculated on the cases in epidemics at Sheffield, Leicester, Warrington, and Dewsbury showed the proportion of mild and severe cases among the vaccinated and unvaccinated respectively. The figures were almost exactly reversed in the two groups. In Sheffield, for example, among the vaccinated at all ages the percentages of mild cases were 82.8; severe, 17.2. Among the unvaccinated the mild cases were 18.5, and the severe 81.5. He thought the statistics told rather unfairly in favour of the antivaccinators because of the large number of cases of imperfect vaccination, and these were put down as vaccinated. Small-pox was not absent from the country. There were cycles of epidemics almost rhythmic in their regularity. In November and December last there were 42 cases at Kirkcaldy; since then cases had appeared at Basford, Lydbrook, Bristol, Ayr, Cardiff, and Grangemouth. Quite recently between 20 and 30 cases were notified at Newhaven. As to the alleged dangers of vaccination, they were, in his experience, due to preventable causes. He had vaccinated between 8,000 and 10,000 persons, and had never seen a case that could be confused with syphilis. He proposed to hand to each member of the Council a copy of Dr. John McVail's review, which was a complete answer to Dr. Creighton's views regarding vaccination and syphilis. It had been suggested that syphilis increased during a period corresponding with increased vaccinations. The antivaccinator quoted from official returns to show this, but omitted to mention that the whole of the increase referred to was in infants under 3 months old—under the vaccination period. Further, the increase in syphilis was greater in the same period in Leicester than in England and Wales generally, vaccination being at the same time reduced to a minimum. The names of Dr. Creighton, Dr. Crookshank, and Sir William Collins were constantly being used by antivaccinators. Of these, Dr. Creighton told the Royal Commission vaccination afforded no protection at all. Dr. Crookshank admitted there was evidence to show a temporary antagonism between cow-pox and small-pox, and that for a period of two or three years small-pox, by the test of inoculation, would not take after an attack of cow-pox. The third—Sir William Collins—was not in reality an antivaccinator. He supported the unanimous decision of the Royal Commission, that the State should continue to provide vaccination. It was a misstatement of fact to say there was no widespread anxiety in the profession. The persons who should be concerned were really concerned. He had collected about 150 "warning notes" from medical officers of health published in their annual reports recently. Examples were read from Ipswich and Liverpool. Dr. Drury handed to the Council the most recent book on the subject of vaccination and small-pox in Liverpool by Dr. Hanna. A communication which appeared in the British Medical Journal from the medical officer of health at Ossett (Yorks) was read by Dr. Drury dealing with an outbreak of small-pox among school children. This "unpremeditated experiment" brought out precisely the points with which the conclusions of the Royal Commission began, and the case for vaccination ended. The epidemic at Gloucester and the "Leicester method" of dealing with small-pox were discussed by Dr. Drury; also the recent outbreak at Newhaven, where three exempted children in one family died from small-pox on consecutive days in January. On the subject of compulsion he did not think the first conscience clause in England did much harm, but the second (1907) had brought about an enormous increase in exemptions. The Legislature would be justified in increasing the certainty, by any means possible, of getting the people properly vaccinated.

Dr. Thomas Mackenzie and Dr. Pantin of Douglas and Dr. Barbour of Ramsey gave important evidence on the subject, and urged the Council not to relax the vaccination laws.

As previously stated, the Council announced its decision on April 21st by unanimously rejecting the Amendment Bill.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

The annual general meeting of the London and Counties Medical Protection Society, Limited, was held on April 30th, at the offices of the society, 32, Craven Street, W.C. Dr. G. A. Heron, chairman of council, presided, and before submitting the annual report suggested that the meeting should send to Sir Jonathan Hutchinson a letter conveying the society's warm greetings and good wishes. He had been its president ever since its foundation twenty-one years ago, and was still keenly interested in its doings The suggestion was adopted unanimously.

The report submitted stated that the past year had been one of prosperity, despite many dangers and difficulties. Not only had the society, as usual, many battles to fight for its members, but it had itself been assailed in the law courts, an effort being made to apply the old enactments against Maintenance so as to hinder its work. The society, however, had been as successful in its own defence as it had in nearly all the cases it had taken up for its members. The fortunate results of the legal proceedings during the year had enabled it to save a substantial balance out of the moneys provided for the protection of its members against adverse verdicts in the courts. The council had watched very closely during the year the questions arising out of the National Insurance Act, but had felt that while the British Medical Association was conducting negotiations in the name of the medical profession any independent public action on its part might do more harm than good. In regard to the future, the council felt that in the new conditions of medical practice it would be more than ever necessary for medical men to provide by the help of the society against numerous possible and even probable dangers to their reputation and position. The plan adopted of providing against damages and costs of the other side in unsuccessful actions had worked very successfully. By undertaking the risk up to the extent

of £2,000 per annum, and reinsuring against anything in excess of that sum up to £20,000 per annum, the council had succeeded in retaining for the benefit of the society a considerable part of the money subscribed by members for insurance purposes. The report also supplied details of a number of cases in which the society's advice and assistance had been sought during the year, and concluded with a financial statement covering the work of the past seven years. The latter showed that, after valuing investments at their market value on December 31st, 1912, instead of at their cost price, and making all other due reductions, the society at that date had at its command for the work of the coming year resources equal to £36,568, in addition to annual subscriptions which would be received during its course. During the expired year 350 new members had been admitted, and 4,762 members were in benefit, in addition to 141 who, being in arrears with their subscriptions for more than a month, were for the time being out of benefit.

In moving the adoption of the report, Dr. HERON reviewed the early history of the society. It had risen from a very small beginning to one which, as the report showed, possessed a very substantial financial basis. It had seemed originally that a subscription of 10s. a member was a very small sum on which to start life, but the work done with that subscription had given results on which every man connected with it must look with satisfaction. Little by little money had been saved, thanks partly to careful management, partly to the fact that practically all the officers of the society did their work without pay, while those who were paid were remunerated on a very low scale. General expenses were still met out of the original subscription of 10s., the additional 10s. now paid being reserved exclusively for the purpose of insuring members against every possible risk of legal actions. The insurance was effected at Lloyd's, which, as it possessed no data for an estimation of risks, was only willing to undertake the work on a yearly contract. Hence, as also with the object of saving the premiums paid, it was desirable that the society should endeavour to accumulate an insurance fund of its own, say a sum of not less than £20,000. The general business of the society was increasing, for members had got to know that it was ready to help them in various small matters as well as in big ones, and sought advice in all sorts of predicaments. Most of such work was done by Dr. Woods, but when he did not feel equal to dealing with any given matter, he, with the consent of the council, handed it over to the society's solicitors, Messrs. Le Brasseur and Oakley, who did their work in a way which entitled them to the gratitude of the members of the society. The National Insurance Act would certainly give the society a great deal more work to do; as that meant increased expenditure, it was very desirable that every member of the society should do his best to increase its roll of membership, for although there was a reserve fund it would not be sound policy to allow general expenses per member to exceed the aggregate amount of the proportion of each annual subscription devoted to them.

The report having been adopted, the business concluded with the election of officers and a vote of thanks to the chairman. The president (Sir Jonathan Hutchinson), the vice-presidents, the treasurer, and the secretaries were re-elected, and the vacancies on the council caused by the annual retirement in rotation of a third of its members were filled by the re-election of Drs. Atkinson, Spriggs, and Stowers, and the election of Mr. Raymond Johnson.

MR. EDGAR JONES, F.R.C.S., of Great Burstead, Essex, who died on August 24th, in his 103rd year, left estate of the gross value of £14,981, of which £12,458 is net personalty.

AN addition has been made to the number of journals produced for the benefit of those who for one reason or another take an interest in horseless vehicles. This is the *Motorist*, a weekly paper whose distinctive features externally are a blue cover and its low price of one halfpenny a copy. It is freely illustrated, and proposes to cater more especially for the needs and tastes of the owner-driver, who is presumed to find too much purely technical matter supplied by the older motor journals. Should the standard of this first issue be maintained, the new journal is likely to become popular.

LITERARY NOTES.

MESSRS. T. C. AND E. C. JACK announce the publication of a new book entitled *Insects: their Life-Histories and Habits*, by Harold Bastin. It is a popular work, embodying in plain language all the latest knowledge regarding insects. The book is illustrated in colour and half-tone.

The name of Shetland, to most people, is usually associated with the manufacture of a certain kind of wool; but probably few of the present generation are aware that the neighbouring islands of Orkney were once almost equally well known for the exportation of imitation Leghorn straw for ladies' hats. Mr. John Firth, writing in the April number of the *Old Lore Miscellany of Orkney, Shetland, Caithness, and Sutherland*, says that straw-plaiting was introduced into the Orkneys by an English company about the beginning of last century, and for many years was a favourite occupation among the younger women, particularly with those whom some physical disability had rendered unfit for heavy outdoor labour in the fields. In those days almost every hamlet had its "plaiting-house," where the young men and girls of the district spent the long winter evenings, the latter busily plaiting straw by the light of the peat fire and a single "cruzie," whilst the former enlivened the monotony of their toil with songs and story-telling. Straw-plaiting was well paid, and the Orkney plait was, for a time, very popular in the south; but the reduction of the duty on foreign straw paved the way for a change of fashion that ultimately resulted in the extinction of an industry which had once given employment to nearly 7,000 women. The Orcadians themselves, however, put down its decline to another and quite different cause. "A story current in Orkney, and generally believed," says Mr. Firth, "was that Her Majesty Queen Victoria, on being presented with a straw bonnet, laughed derisively at it, and then placed it on the head of her pet dog; and that on hearing of this action of the Queen all the ladies in the south gave up wearing straw hats," probably one of the most remarkable explanations ever given of the vagaries of "Fashion, leader of a chattering train, whom man, for his own hurt, permits to reign." The same number of the *Old Lore Miscellany* contains a description of the early Christian monuments of Caithness, and some natural history notes on the habits of the sea-eagle, a species once common in the Western Highlands, but now, unfortunately, showing signs of dying out.

The horrors of war have been well described by many writers; but none, perhaps, have drawn a more moving picture of the sufferings of the rank and file than the famous collaborators Erckman and Chatrian, whose novel *Le Conscrit* enables the modern reader to realize the miserable plight of the wounded during the Napoleonic campaigns. The rough-and-ready treatment meted out to patients in a field hospital less than a hundred years ago is now, happily, a thing of the past, and to-day no effort is spared to ensure the comfort and safety of the sick and wounded after a battle. An interesting proof of the enormous improvement in military hygiene is given in the April number of *L'Hygiène*, which contains an account by Dr. Rebreyend of his experiences with the Red Cross Ambulance sent from France to Philippopolis at the beginning of the Balkan war. It supplements the more severely professional accounts of ambulances in the Balkan war given by Laurent of Brussels, and Monprofit of Angers, noted in our issue of March 22nd, p. 623. The French ambulance was established in an empty college belonging to the Assumptionist Fathers, whose pupils had deserted them as soon as war was declared, and the new arrivals found themselves well received by the Bulgarians, whose confidence and affection they quickly gained. His touching belief in the infallibility of the French doctors and the dauntless courage that seems to be a characteristic of his race made the Bulgarian soldier an ideal patient, and Dr. Rebreyend and his colleagues had the satisfaction of seeing many men leave the hospital restored to health and activity after injuries that a century earlier would either have killed them outright or disabled them for life. An interesting pendant to Dr. Rebreyend's experience of modern warfare has been contributed to the April number of *L'Hygiène* by M. Pasteur Vallery-Radot, who has had frequent opportunities during the last few months of observing the effects of gunshot wounds in the hospitals

of Constantinople. The same number of our excellent contemporary also contains the first instalment of a series of articles by Dr. Cabanès on the hobbies and amusements of European royalties; and some useful hints from Mme. Augusta Moll-Weiss on the diet of young children.

Questions of "purity" of speech have always excited a good deal of interest among readers of the JOURNAL. We have always contended that philological pedantry must not be allowed to hamper the growth of language. It is related that Lord Thurlow was once waited upon by a deputation of Nonconformist divines, who asked him to help in the redress of certain alleged grievances and disabilities. The Lord Chancellor told them he could do nothing for them unless they got their "d——d religion" established by law. This irreverent expression applied to language seems to state the true principle, which is that whatever gets itself established is right. In an excellent article on the *Oxford English Dictionary* which appeared some little time ago in the "Literary Supplement" of the *Times*, it is pointed out that the problem of "purity" of language confronts Frenchmen and Germans as well as ourselves. M. Henry de Gourmont, in his *Esthétique de la Langue Française*, says "purity" consists in assimilation. He holds that the French words are pure which have undergone those modifications and changes by which the French language has been created out of Latin and given its French character and sound. On the other hand, "impure" words are those which have been imported by scientists and scholars unchanged from the classical languages, or have come in from modern tongues unassimilated in sound and form.

> As English is partly Teutonic and partly French in origin and character, it is in a combination of the German and French ideals of purity that we shall find the soundest basis for our conservatism. From the Germans we may learn to encourage native terms and from the French to assimilate our borrowings and make them conform to native ways.

The writer goes on to explain that by the "Anglicity" or integrity of the English language is, or should be, meant the harmony of our new terms with the real core or central part of the language. Those which are out of harmony with this should be regarded as "impure," and we should endeavour to modify them or cast them out. But, as we have insistently urged, language is a living, ever moving thing, the advance and expansion of which cannot be controlled by artificial restrictions. As the writer from whom we have quoted puts the matter:

> We cannot "shut up the sea with doors or draw our Leviathan with a hook," and it would seem as if the individual must struggle in vain against the great collective will of the community.

That collective will, it is added, is not altogether a blind force; it is ultimately governed by a confused sense of what the language ought to be. More and more the soundness of this speech-feeling depends upon the taste of the educated classes. If they encourage the right fashions, the set of the language will be guided in the right direction. The writer goes on:

> But something the individual can do towards forming a healthy state of public opinion; and in cases of undecided usage he can give his vote (which may be a casting vote) for the purer and more English form. He can help to wear off the awkward newness of new and native compounds; and when foreign words appear in two forms (*foci* and *focusses*, for example) . . . he will have a sound and definite principle to direct his choice. And if he be a fanatic in the cause of purity he can easily attain to martyrdom by attempting to naturalize the large and increasing number of our unassimilated terms. He will be committing a solecism but committing it in a good cause; and our usage, which has already discarded so many foreign pronunciations and so many pedantic plurals—*asyla*, *ideae*, *chori*, *musaea*, *sphinges*—may come round to him in the end.

We do not, however, allow that he is guilty of a solecism when he gives the adopted word an English dress; he is doing his best to maintain the "purity" of our speech by promoting the assimilation of foreign words. The "martyrdom" to which he may attain by this would scarcely entitle him to a place in the *Acta Sanctorum*. We have ourselves been through it in respect of such plurals as "serums," "sanatoriums," and we have had the satisfaction of seeing them already almost as firmly established as "encomiums," "eulogiums," and so forth. Doubtless there were some who felt their sense of philological propriety outraged when Matthew Arnold wrote of "Cerberuses," but the author of *Friendship's Garland* is not one penny the worse in literary reputation for the "solecism."

SCIENCE NOTES.

As a result of research work carried on by the National Fruit and Cider Institute at Long Ashton, in Somerset, it has been demonstrated that the blackening of pear blossom and foliage, resulting in the withering of the fruit, is due to a specific bacillus, and not to frost and cold winds, as is commonly supposed. In reply to a question in the House of Commons, however, the President of the Board of Agriculture has stated that the Board is not at present in a position to issue a leaflet on remedial measures.

At a meeting of the Roentgen Society, on May 5th, Dr. F. Hernaman-Johnson, in a paper mainly on the subject of the secondary radiation obtainable from metallic and other substances when excited by a primary *x*-ray beam, mentioned that divergent results were forthcoming from the electroscope on the one hand and the photographic plate on the other when employed to measure this secondary-ray effect. In discussing the paper, Mr. J. H. Gardiner, F.C.S., said that a little thought made it clear that the difference between the indications given by the electroscopic and by the photographic method was inevitable. The action on the photographic plate was cumulative, while that on the electroscope was instantaneous; further, the photographic emulsion itself acted as a screen, and this introduced another variable element. Mr. C. E. S. Phillips said that attempts to measure secondary radiation by means of the photographic plate were necessarily vitiated by the scattered primary rays. An interesting suggestion was put forward by Mr. F. H. Glew, who had attempted to obtain the photographic effect of the secondary radiation proceeding from gold, silver, and copper. Using a hard tube, he had found that the silver gave an entirely abnormal effect, its image being disproportionately intense, and he thought it quite possible that the silver in the photographic plate itself acted selectively, having a preference for its own radiation, so that in the case of a silver medium an *x* radiation was excited to which the silver in the photographic plate was specially responsive. The photographic effect might therefore be due to an ionization action on the silver and not to a wholly chemical action, nor to a physical one, save so far as ionization was physical. If this were the case, photographic effects obtained in many investigations of the kind were open to error.

The murexide reaction is the standard test in use for the presence of uric acid in the blood, but it is merely a qualitative test, and as it is liable to confusion with the xanthroproteic reaction, owing to the presence of various protein materials and phenol compounds in the blood, it is probable that many of the positive results that have been reported were erroneous. The methods devised for quantitative estimations are either not sensitive enough or demand a very large quantity of blood for their application. Folin and Denis use a phosphotungstic acid solution (*Journal of Biological Chemistry*, January, 1913) which is capable of detecting 1 part of uric acid in 1 million parts of water. The blue colour obtained from $\frac{1}{4}$ mg. of uric acid is adequate for a quantitative estimation, and this amount has been found to exist in from 15 to 25 c.cm. of normal blood. A weighed volume of blood is oxalated, and after treatment with five times its volume of boiling acetic acid solution is filtered and the residue refiltered after treatment with boiling water. The combined filtrates are further acidified and evaporated to a small volume. The uric acid is precipitated from this concentrated mother liquid by alkaline silver lactate solution, and after treatment of the precipitate with hydrogen sulphide the uric acid is obtained in solution. The blue colour produced by the addition of the phosphotungstic reagent is estimated approximately by dilution to the tint of one of the standard solutions, and then accurately determined by comparing it with that standard in the colorimeter.

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PSYCHIATRY AND THE GENERAL HOSPITAL.

ELSEWHERE will be found a report of the opening of a special department for the study and treatment of mental diseases in Johns Hopkins Hospital, Baltimore. The Phipps Psychiatric Clinic owes its existence to the enlightened liberality of a wealthy citizen of New York who sees in it a means of improving the treatment of the insane. How much has been done in that direction by the combined efforts of physicians and philanthropists in modern times can be learnt without laborious research by a glance at Hogarth's picture of Bedlam, which represents the last of the phases of the "Rake's Progress," or at Goya's still more dreadful picture of the Casa de Locos.

The clinical study of insanity has shed much light on the manifestations and course of insanity, and in recent years the investigation of its pathology by the scientific methods of the laboratory has led to the discovery of the physical basis of certain forms of the disease. But the immense importance, not only to the insane themselves but to the community, of a knowledge of mental disorder is still imperfectly recognized by those entrusted with the management of public affairs, and not at all by the people who place it in their hands. To this cause, combined with a short-sighted economy, is due the amazing apathy which so long delayed the realization of Dr. Maudsley's scheme of a hospital for the treatment of the insane in London, and at one time threatened to defeat the object of his princely munificence. As has repeatedly been pointed out, institutions on hospital lines where cases of acute insanity and those in the incipient stage can be promptly dealt with, where cases on the borderland can be watched, and where chronic cases can be weeded out and drafted to asylums, are essential if really satisfactory results are to be obtained. It is obvious that the indiscriminate herding together of masses of mad folk in huge barracks does not place them in conditions favourable to recovery.

Magnificent as are many of our asylums, we are sadly behind Germany and the United States in the matter of hospitals for the scientific study and treatment of mental diseases. In Germany every city of more than 50,000 inhabitants has a small hospital for acute cases and a colony for chronic lunatics in the country. Dr. Peterson of New York has strongly advocated this as the ideal system. In the United States emergency cases of insanity are, we believe, treated in the Bellevue Hospital, New York, and in the Blockley Hospital, Philadelphia. Bellevue has a separate pavilion for the purpose, with thirty beds and a resident medical staff. Some years ago the general hospital of the city of Albany, New York, built a model pavilion for the exclusive care of the insane, and a mental hospital was constructed by the State of Michigan in connexion with the State University at Ann Arbor.

Until lately insanity has been looked upon as altogether different in kind from other diseases, and the medical student has had very limited opportunities of studying the phenomena that indicate a disordered mind. The subject has to a large extent been isolated, and as a necessary consequence has been neglected by all but specialists. In Germany, indeed, psychiatry has been kept in touch with general medicine by the establishment of clinics in connexion with the universities. Every university has a psychiatric clinic, with pathological, chemical, and psychological laboratories. Special mention may be made of those of Giessen, Berlin, Kiel, Munich, Breslau, and Greifswald. Of the scale on which these institutions are built a notion may be formed from the fact that the one in Munich cost £120,000. Dr. Peterson, in his article on the hospital treatment of insanity in the *Encyclopaedia Britannica* (1902), says that the mental hospital should, if possible, be associated with a university or medical school; and Sir Thomas Clouston recently stated that this view is now accepted by all medical psychologists.

The Phipps Psychiatric Clinic is not only a university clinic; it is also a special department of a general hospital. This is a great advance which will bring the study of mental disease out of the seclusion in which it has hitherto been forced to dwell into free commerce with other provinces of medical activity. Psychiatry, instead of being, in the words of Sir William Osler, stamped with a taboo of a peculiarly offensive character, will, at Johns Hopkins, be in organic relationship with the clinical study of other diseases, and the student will realize that it is not an art or mystery standing by itself, but a living branch of the great tree of medicine. The Clinic will be a centre from which knowledge will be diffused among assistants in asylums and also among general practitioners. We need not labour the point that it is vitally important that doctors in general practice should be able to recognize the signs of oncoming insanity, and should be fully acquainted with the relations between mental disease and heredity. On them often depends the hope of cure for the patient, while to society they are the first line of defence against the spread of insanity. They will have a much better chance of obtaining the necessary knowledge in a hospital clinic than in the wards of an asylum.

Sir William Osler speaks of a national campaign against mental ill health through education. By "education" we take it that Sir William Osler means the education of the public mind in a rational system of eugenics. But there is another way in which insanity may be to a considerable extent prevented. Dr. Mott and others have shown that certain forms of insanity are caused by syphilis, and are therefore for the most part preventable. The diminution of syphilis would therefore entail a corresponding diminution of insanity. A campaign for the prevention of syphilis has recently been organized in Australia, and is said already to give good promise of success.

Sir William Osler concluded with the pregnant suggestion that a study, at once critical and sympathetic, of the epidemics of mental, moral, and economic folly which sweep over classes of people and whole nations, would be helpful. Certainly nothing would be a greater benefit to society in these days of superstition, credulity, sentimentalism, and contagious hysteria, than the discovery of means of conserving sanity in the individual and the community. To this end the human mind must be

closely studied in all its vagaries; the source of these must be traced, the conditions that favour or check their development determined, and the means of turning the perverted energies to which they may be due into right channels if possible discovered. This will be the work of the Phipps Psychiatric Clinic, and we heartily share Sir William Osler's hope that it will be successful. It is to be wished that the example of Mr. Phipps may be imitated by some philanthropist in this country. There is a large field for the study of the pathology of the mind, and, although much may be expected from the establishment of the Maudsley Hospital, there is abundant room for the psychiatric clinic.

THE CAROTID BODY.

ALTHOUGH this little bilateral structure was found by Haller so long ago as 1766, it is only quite recently that attempts have been made to apply the test of experiment to the question of its possible functions. The carotid body is present in all mammals; according to some writers it is found in birds; its presence in reptiles has been proved by Trinci (1909, 1912), and by de Gaetani (1912); Maurer describes it as present in amphibia but absent in fishes; it does not appear to have been found in cyclostomes. In man it is situated most commonly on the inner side of the common carotid artery close to the bifurcation—the site in which de Gaetani has found it in *Lacerta viridis* and *muralis*. The human carotid body is a greyish or brownish-red ovoid body, measuring from 5 to 7 mm. in length, 2½ to 4 mm. in breadth, and 1.5 mm. in thickness; it is sometimes bilobed. It is highly vascular—a fact which tends to prove that it is not a rudimentary and functionless organ. Its arterioles come from the common carotid artery or its two main branches. It has an extraordinarily rich supply of nerves, chiefly non-medullated; these were described by Luschka fifty years ago as coming from the plexus intercaroticus, which is formed by fibres from the glosso-pharyngeal nerve, branches of the vagus nerve, and communicating twigs from the superior cervical ganglion of the sympathetic. This very rich nervous plexus contains some very small ganglia. Kohn describes a close relationship between the nerve fibres of the carotid body and its specific cells. He recognizes four histological types of the mammalian carotid body: (1) The compact circumscribed form in which the connective tissue of the organ is finely divided so that the cellular character of the tissue stands out prominently, a type seen in the cat; (2) the lobular type with much connective tissue, as in the monkey; (3) the insular type seen in man, the organ being divided into separate islets by connective tissue; (4) the diffuse type, consisting of scattered islets, as in the rabbit. As a rule the cells of the carotid body are large. Their shape varies considerably; they have a large granular nucleus, and one, or even sometimes two, nucleoli.

Various opinions have been held as to the nature and the morphological position of the carotid body. The earlier anatomists looked on it as a nerve-ganglion; Luschka considered it to be of glandular nature, resembling the pituitary and the adrenals. Its developmental origin was held by Stieda to be from the epithelium of a branchial cleft. Some observers derived it from the parathyroid bodies, which are themselves of branchial origin. Yet others claim to have proved that it arises from a thickening of the internal carotid artery at its point of origin, and that its elements are not epithelial, but perithelial. Modern embryologists for the most part accept the teaching of Kohn that it is derived from the embryonic sympathetic system. Kohn regards it as a part of the chromaffine system, and gives it the name of paraganglion intercaroticum; yet he admits that its cells, even when fixed with the mixture of potassium bichromate and formol (which gives a marked chromaffine reaction in the case of the true paraganglia), do not for the most part take the yellowish-brown coloration well, while some fail to take it at all. But he claims that even these uncoloured cells show by their form, size, and disposition, the characters of chromaffine cells. Still, we do well to bear in mind that mere cell-characters form a very unsafe basis on which to found a morphological classification. It is important to note that Pende (1909) failed to obtain the chromaffine reaction by Kohn's staining methods in the case of the carotid bodies of newly-born children, whilst he got it readily in the case of the ganglia of the solar plexus, the adrenal medulla, and the paraganglion of Zuckerkandl (the temporary aortic bodies found in the newly-born child). Again, Tarozzi failed to get the reaction in the carotid body of human adults; and lastly, Vassale (1911) failed also in the case of the cat's carotid body, while he obtained an intense chromaffine reaction from small punctiform paraganglia found in these animals in the course of the abdominal sympathetic. He notes also that in the cat he never got the perchloride of iron reaction of Vulpian, which is characteristic of the vaso-constrictor principle of paragangline, the secretory product of the paraganglia. Vassale therefore concluded that the carotid body could not be included in the paraganglia, and that it was an organ whose nature still remained to be determined. The tumours of the carotid body, which occasionally occur in man, have received attention from many pathologists, and they have even formed the subject of a thesis by M. Pagès (Montpellier, 1911); but up to the present, however, clinico-pathological studies have quite failed to throw any light on the functions of the carotid body.

The earliest experiments were apparently those of Scaffidi; it is stated by Vassale that Pende mentions that Scaffidi got entirely negative results from bilateral extirpation of the carotid body in guinea-pigs. Similar extirpation experiments were attempted by Vassale in 1911 in cats; but he found that in them complete extirpation was difficult, if not impossible, on account of the great risk of injury to the carotid artery. He chose the cat for his inquiry because, as was first pointed out by Kohn, that animal's carotid body is a compact parenchymatous organ, is clearly delimited from neighbouring structures, and is composed of numerous cell groups with little connective tissue. Vassale failed to completely extirpate the cat's carotid bodies, and adopted the method of their destruction by the cautery. He carried this out successfully in thirteen cats and kittens. In all the animals glycosuria appeared in the first urine voided on coming out of the chloroform narcosis; this disappeared usually on the fourth day. Albuminuria was generally absent; when present it appeared as only a trace on the first day. During the period of temporary glycosuria the animals were depressed, their hair was bristly, and their voice was raucous; but appetite remained good and recovery was perfect except in the case of two kittens, which were kept under observation for five or six months; although they ate voraciously and showed no glycosuria after the first three days following the operation, yet they became cachectic, showed alopecia of the head, neck, and body, emaciated greatly, and died from asthenia.

Vassale does not believe that the post-operative glycosuria is due to a lesion of the very abundant nerves of the carotid body, for in one case of attempted bilateral extirpation he found that a small piece of one carotid body was left, and yet glycosuria followed. In another case avulsion of the nerves entering the carotid body was followed by only minimal traces of glycosuria. With reference to these experiments it must be remembered that the cat is specially apt to show temporary glycosuria after any operative procedure. We cannot, therefore, admit that Vassale's experiments materially help us to understand the nature of the functions of the carotid body, and still less the mode of their action.

The recent experimental studies of Frugoni (1912) have added facts of positive value which help towards a better understanding of this question. He has approached the subject by means of the extract-injection method. He prepared extracts from the carotid bodies of young calves by a special method, so that 4 c.cm. of the extract represented one carotid body. He found that 4 to 6 c.cm. usually proved rapidly fatal when injected intravenously into rabbits. Changes were found in the blood, heart, and respiration, but he established the interesting fact that, by diminishing the interval between small doses, which were well borne, and by gradually increasing the dose, he was able to set up such a tolerance that even many times the ordinary fatal dose was easily borne. Small doses of carotidin gave rise to moderate vascular hypertension followed by fall of pressure, which was considerable and prolonged; it was proved that this hypotensive phase was not due to a modification of tonus of the bulbar vasomotor centre; it was shown that carotidin had a definite vaso-dilator property, and that the hypotension was, at any rate, largely subordinated to this vaso-dilator action. Experiments on the isolated hearts of rabbits showed that the vascular hypotension was not due to cardiac weakness; the extracts, indeed, tended to strengthen the heart. Frugoni did not observe changes in the blood vessels following repeated carotidin injections, such as are produced by adrenalin, lead, or tobacco. He further demonstrated the interesting facts that adrenalin when injected in the complete hypotensive phase of carotidin, gave its usual blood-pressure effects; that carotidin, when injected in the hypertensive phase of adrenalin, gave some hypotension, but only in large doses; and finally that, when adrenalin, and carotidin were injected simultaneously, the effects of adrenalin were always obtained, but possibly with a slightly less abrupt rise of blood pressure than that produced by adrenalin alone. Frugoni concluded that the carotid body probably possessed a true internal secretion, but that its existence could not at present be categorically affirmed. These experimental studies of Frugoni will, of course, be repeated, amplified, modified, and added to. One application is sorely needed: we need to know what histological changes, if any, occur in the endocrine glands of both young and old animals which have been previously injected with carotidin, from young and old animals, both in the case of the large, rapidly fatal dose, and in the case of smaller, long-continued doses.

In view of the conflicting opinions as to the genetic origin of the carotid bodies, and the absence of all chromaffine reaction in at least some of their cells, it seems quite possible that these little bodies may prove, on renewed embryological study, to be of double ontogenetic origin; in that case, they would be brought into line with the adrenal glands whose double genetic origin has been proved by many observers. Be that as it may, we now have definite proof that the carotid body has an action on blood vessels; and we must class it among those many small gland-like bodies which have an action on body metabolism, an action which is as yet by no means nearly fully understood. One important point concerning the carotid body which seems not to have been studied is whether it remains of constant size throughout life or becomes smaller or larger during post-natal life. Even if it becomes smaller, we should not be justified in saying that it is useless, or is even becoming useless. Who will to-day be so rash as to say that the adrenals are becoming useless? And yet the fetal adrenals are much larger absolutely, and enormously larger relatively, than in post-natal life; and they go on diminishing in size in relation to the body weight of their possessor during the passage from early life to maturity. This question of the gradual changes in the size of organs, and the probable gradual change in functions that accompanies them, is one of the greatest physiological problems waiting for solution. It seems probable, in the light of Darwin's work, that all organs are always changing, the only difference being that some change very slowly—that is, the testes, etc.—and others more quickly and more radically. Any one who may be inclined to sniff contemptuously at the bare idea of such an insignificant looking organ as the carotid body possessing functions may be advised to remember that, if Maurer be right that these organs exist in amphibia, the history of the carotid body goes back to the Permian period of the Palaeozoic era when amphibia first made their appearance. And when we have got back so far as that we have gone a long way indeed! And yet here is this small body still "going strong" and showing no signs of any intention to disappear in any animal that is known to possess one. It may play one of the small parts in the physiological drama, but that it does its part well we cannot doubt.

HOUSING REFORM.

AN important statement was made by the Prime Minister on May 7th, in reply to Sir A. Griffith-Boscawen, who directed his attention to the speech made by the President of the Local Government Board in Standing Committee A on May 1st, in which he stated that the proposed grant-in-aid of housing was wrong in principle, and that it would deter private enterprise and discourage local authorities. It was asked whether in this matter the President of the Local Government Board was speaking for himself only or for the Government, and whether the Government had definitely decided against State grants-in-aid of housing.

The Prime Minister said that the remarks of the President of the Local Government Board were directed to criticizing the financial proposals of the bill under consideration, and that he agreed with him that in that particalar case they would have been wasteful and unjust. The Prime Minister, however, added that the Government certainly had never said, and did not say now, that the question of grants-in-aid was excluded from consideration.

Other statements also recently made by the Prime Minister indicate that the representations which are being made from all quarters of the House on this subject are receiving the attention of the head of the Government, whose public utterances afford a welcome contrast to the attitude adopted by the President of the Local Government Board. It must

be plain that, whilst under the existing law considerable clearances of insanitary dwellings may be made, the difficulty of rehousing the displaced occupants is not being overcome, and that the whole subject of the character, powers, and duties of the local authorities, the security of tenure of their medical officers, and the rehousing at economic rents of displaced tenants are all so inter-related and inv ed that simple and effective reform, coupled with State aid, are essential if progress is to be made. It would appear, however, that he would be a sanguine person who looked for such undertakings whilst the policy of the Local Government Board, as defined by its President, remains as it is at present.

THE NATURE OF THE WASSERMANN REACTION.

That the Wassermann reaction for syphilis is not a true example of the Bordet-Gengou phenomenon was early demonstrated, but the real nature of the reaction still requires elucidation. Recent researches by Thiele and Embleton[1] with the object of discovering the true nature of the antigen and antibody, throw some further light on the subject. They conclude that the antibody so-called in the Wassermann reaction is not a true antibody, and is not characteristic of syphilis, but is probably only a stage in the formation of an anticomplementary combination which develops when there is rapid tissue destruction, as in acute infections, narcosis, and death. In all these processes proteins and their cleavage products are set free, and phosphatids are liberated. The latter form new combinations of the nature of non-specific antibody and antigen. In syphilis the process of destruction is slow, and the anticomplementary combination is not complete until an active lipoid has been added. The tissue destruction occurring in acute infections, after narcosis, and during and after death accounts for the apparent Wassermann reactions reported in such cases, but the authors do not regard these as true Wassermann reactions. Again, as regards the antigen, these observers find that the complement-fixation property is independent of the number of spirochaetes, their products, or changes due to their presence, and that there is no evidence that syphilitic organ extracts bind antibodies which cannot be bound by non-syphilitic extracts. They draw attention to the errors which may occur in carrying out the Wassermann reaction. In the first place, the antigen itself may be anticomplementary, and "an antigen can cause relatively and absolutely quite a large absorption of complement before any trace of inhibition of lysis becomes evident." Secondly, serums often contain anticomplementary substances which increase on standing. They also state that if two anticomplementary substances are mixed together, the complement-binding power of the mixture is much greater than the sum of the quantities bound by the separate components. In this way the mixing of an anticomplementary substance such as cholesterin with the antigen in the Wassermann reaction causes an increased absorption of complement, much greater than the sum of the quantities which are bound through the reaction, and through the anticomplementary power of cholesterin. The reaction is thus made more sensitive, while much more complement is absorbed. This is, however, in no way a property of syphilitic serum, but always occurs when two anticomplementary substances are brought together. This power they call the adjuvant phenomenon. They conclude, finally, that a true Wassermann reaction is only produced by injection of tissues of homogeneous origin. Thiele and Embleton's researches are no doubt of much interest from the biochemical point of view, but it can hardly be said that they add much support to the diagnostic value of the Wassermann reaction, for it appears that not only does the reaction bear no relation to the presence of spirochaetes, but also that, unless the test is performed with definite quantities of reagents (themselves more or less unknown quantities), an apparent Wassermann reaction may be produced by anticomplementary substances present in the antigen or serum.

[1] *Zeitschrift f. Immunitätsforschung*, Bd. vi, Heft. iv, p. 430.

ACTION OF NORMAL PRODUCTS OF METABOLISM ON THE CIRCULATION.

In a thesis for the degree of M.D., E. L. Backman[1] has given an account of work done by him at the Physiological Institution at Upsala and elsewhere between the years 1905 and 1912, as to the action, if any, of the products of metabolism, particularly the nitrogenous decomposition products, on the normal circulatory system. The experiments on the heart and blood pressure were carried out on rabbits, and the substances tested included ammonium carbonate, sodium hippurate, creatin, hypoxanthin, xanthin, and allantoin. The dilution of these bodies corresponded as closely as possible to that in which they may occur in the blood in health or disease. It was found that a 0.16 per cent. solution of creatin increased the contractility of the isolated heart, and that an intravenous injection of creatin solution, constituting 0.18 per cent. of the blood, caused a marked and continuous rise of blood pressure and a transitory increase in the pulse-rate. Many of the other substances had a somewhat similar action, but the rise of blood pressure varied considerably in character. He describes four types of pressure curve. In one the variations were slight but well maintained; in another the pressure fell to a marked degree, but rapidly rose again; in a third, when sodium hippurate was given, large oscillations of blood pressure were observed over a long period; in a fourth, when ammonium carbonate, creatin, hypoxanthin, or allantoin were given, the pressure fell rapidly, and then rose slowly to normal. The author concludes that, in certain strengths, all the substances he has tested increase the work done by the isolated heart. Several of the substances, when injected into the blood, increase the pulse-rate and raise the blood pressure. Many, too, are powerfully diuretic, and he credits them with the power of stimulating the circulatory system, and thus effecting their own elimination. Whether they also act directly on the renal epithelium, and thus hasten their excretion, is not clear. The thesis contains no promiscuous speculations about the conclusions to be drawn from the experiments as applied to man, and even as applied to the experimental animal Backman is guarded. He is honest enough, in fact, to admit frequently that his work is incomplete, and that further investigation is required.

[1] *Bidrag til Fragan om Normala Ämnesomsättningsprodukters Verkan pa Hjärta och Blodtryck.* Af E. Louis Backman. Upsala: Almquist and Wiksell. 1912. (Demy 8vo, pp. 232.)

THE ORIGIN OF A BACTERIOLOGICAL CHAIR.

In addition to the Moncrieff Arnott Chair of Clinical Medicine, the regulations for which were approved at the meeting of the University Court on May 7th (see page 1089), another medical professorship in the University of Edinburgh—that in Bacteriology—is now about to be founded. The circumstances which make this foundation possible are somewhat peculiar; indeed it may be said without much exaggeration that bacteria have had a good deal to do with this chair of bacteriology. There is an island, about twelve miles long and nine miles broad, lying some two hundred miles to the south of Java in the Indian Ocean, which is called Christmas Island. It was visited in 1688 by Dampier, who found it to be uninhabited by man but swarming with seafowl. Exactly two hundred years later (in 1888) it was annexed by Great Britain, chiefly as a result of the repre-

sentations of Sir John Murray (of the *Challenger* Expedition) and by the influence of the late Duke of Argyll. Sir John Murray had found that the island contained valuable deposits of phosphate of lime, and, according to a writer in the *Encyclopaedia Britannica* (vol. vi, p. 294), this phosphatic deposit had doubtless been produced by the long-continued action of a thick bed of seafowl dung (this is where the bacteria come in), which had converted the carbonate of the underlying limestone into phosphate. Sir John Murray obtained a lease of the island and formed a small company to develop its resources. In this company the late Robert Irvine, a Fellow of the Chemical Society, held 230 shares of £10 each, and at his death he bequeathed his interest in the company for the purpose of establishing a Chair of Bacteriology in the University of Edinburgh when the interest from these shares should reach the sum of £25,000 or £30,000, as the trustees might determine. Doubtless it did not appear very likely at the time that shares to the value of £2,300 would yield £30,000 within anything like a short term of years; but those persons who were sceptical have been pleasantly disappointed, for in eleven years from the death of the donor, so lucrative has the undertaking turned out to be and so busy in shipping the phosphates have the few hundreds of Chinese and Javanese workmen on the island been, that that large sum of money is available. Indeed, there will be enough to equip class-rooms and laboratories also, and to aid research, whilst, in accordance with Mr. Irvine's wishes, a merely nominal fee will be charged to those attending the lectures or working in the laboratories. The surviving trustees, who are Professor Sims Woodhead, Dr. David Patrick, Dr. David S. Jerdan, and Mr. William Maxwell, are now about to hand over to the University Court the sum named for the founding of the chair. But this is not all, for the remaining interest in the shares is ultimately to pass in equal lots to the Edinburgh Royal Infirmary, the Royal Edinburgh Hospital for Incurables, and the Dunlop Cancer Fund. In this curious way has Christmas Island with its accumulated stores of phosphates, the deposits of countless generations of seafowl, and the results of their internal metabolic processes, come into the history of the founding of a chair of bacteriology. "Truth is stranger than fiction," as Byron sang; and "truth makes all things plain" and easy, as Shakespeare said.

MEDICAL TERMS IN THE NEW ENGLISH DICTIONARY.

ONE of the most interesting medical words in the present instalment of Sir James Murray's great lexicographic achievement[1] is *Sore*. As a noun it has had three meanings, two of which at least are now obsolete, namely, bodily pain, disease, and mental suffering. As an instance of the first Dr. Craigie (who edits this part of the *Dictionary*), gives the sentence from *Cursor Mundi*, "Ute of his side . . . wit-oten sare a rib he tok"; of the second, "S. Anthonies Sore, called the Rose," forms an example; and Chaucer furnishes an illustration of the third usage in his question, "Who feeleth double soor and heuynesse But Palamon?" A fourth meaning of *sore* is almost obsolete, namely, a bodily injury or a wound, for Dr. Craigie has to go back to 1785 for the quotation, "He'll suck the poison frae the sair, An' be a noble leech." The only meaning of *sore* which has, so to say, held its own is "a place in an animal body where the skin or flesh is diseased or injured so as to be painfully tender or raw"; of this there are numerous instances, such as bring "a salve for that sore," and such compounds as *bed-sore* and *saddle-sore*. *Sore*, the adjective, has also had meanings which are now obsolete or nearly so; for instance, a *sore head*, signifying a headache, is often quoted as a Scotticism, but it is really a survival of the word sore in the sense of pain. Indeed, *sore throat* and *sore spot* do not necessarily imply any ulceration of the mucous membrane or skin. But we must pass on to some other medical terms, for there are many of them between the words *sniggle* and *sorrow* with which this section begins and ends. There is the obsolete *sords*, meaning filth, with its not-naturalized relative *sordes* and its little family of *sordid*, *sordidness*, *sordidly*, and *sorditude*. *Sordes*, which, by the way, may be construed either as singular or plural, signifies either filth or faeculent matter, or, more particularly, impure matter collecting about the teeth and gums, especially in typhoid fever. We use *sordid* so often in its application to habits and character that we are surprised to find that it is still employed in a strictly pathological sense; at any rate, the late Dr. Matthews Duncan wrote of "sordid epithelial detritus." A somewhat rare medical term is *sorbefacient*, derived from the Latin *sorbere*, to absorb, and meaning a substance which causes or promotes absorption; thus, mercury and iodine have been supposed to act as sorbefacients. *Sopor* is used itself to express deep sleep, and from it come *soporate*, *soporation*, *soporative*, *soporiferous*, *soporific*, *soporose*, and *soporous*; but it is not at first sight clear why *soporal* should be a synonym for carotid until we read Dr. Craigie's illustrative quotation from Phillips, "the Carotid Arteries, so call'd because if they be tied, they immediately incline the Person to Sleep." In this, as in other parts of this dictionary which have been commented upon in this JOURNAL, the reader will be struck by the care expended in giving the medical senses in which ordinary words are occasionally used. Instances of this minute and vigilant care are found under such terms as *soothing* (for example, syrups and applications), *solvent* (a laxative), *solution* (for example, in "solution of continuity" and as meaning the crisis of a disease), *solicit* (in the sense that aperients solicit peristalsis), and *snuffles* (meaning the malady of children in which respiration is hindered in the nose). The mysterious word *sooterkin* is fully illustrated; it seems first to have signified a sweetheart (*soetkin*, *dulcis amica*), and then, wonderful to relate, an "imaginary kind of afterbirth" associated in some recondite manner with Dutch women sitting over lighted stoves, and finally a literary composition of a supplementary or imperfect character. We may assure the editor that the *New English Dictionary* at any rate runs no risk of having this quaint term applied to it.

[1] *A New English Dictionary on Historical Principles.* Sniggle-Sorrow (vol. ix). By W. A. Craigie, M.A., LL.D. Oxford: At the Clarendon Press, Henry Frowde. Double Section. Price 5s. (1 dol. 25 c.). April 1st, 1913.

TRIALS OF A COURT PHYSICIAN.

A PHYSICIAN who has the keeping of a sovereign's health enjoys the advantages of a conspicuous position, but against this must be set the heavy burden of responsibility which he has to bear. He may also have difficulties with his august patients; even Louis XIV, the most doctor-ridden of monarchs, resented an expression which seemed to imply that he was under a physician's "orders." Dr. Barthez was in 1856 attached to the person of the Prince Imperial, then an infant of 3½ months. The doctor's letters to his wife from Saint-Cloud have recently, we learn from the *Chronique Médicale*, been published in a book entitled *La Famille Impériale*. Barthez, who was evidently a close observer, gives a picture as detailed as a Dutch painting of the Emperor and Empress and of the Imperial Court. The physician had to use a good deal of diplomacy in the exercise of his functions. Neither Napoleon III nor the Empress Eugénie had much faith in rational medicine. The Empress professed to believe that all doctors were ignoramuses who never worked. She scoffed at their endeavours to cure diseases and prevent death, a thing which she declared to be impossible, since when the hour had struck the player on

the stage of life must make his exit. This fatalistic attitude, though unreasonable, is at any rate intelligible. But it is not easy to understand how Her Majesty could have been led to say that doctors never gave a thought to the relief of suffering! This statement is all the more amazing since the Empress who—wrongly as it turned out—believed herself to be pregnant, expressed a wish that she should be chloroformed when the expected hour of sorrow arrived. "It is even possible she may compel Jobert to give her the anaesthetic without cause, solely that it may be ascertained whether she could be pregnant." The Emperor thought there was an immediate remedy for every pain. Induced pain he bore with stoical fortitude. He rode on horseback with sores on the thighs and legs caused by recently applied blisters. He did not complain of the production of pustular eruptions on the back by the use of irritants. It was even believed that he applied moxas to himself. To all this he submitted with such patience that no one about him was aware of his sufferings. This recalls the heroic endurance which he showed at Sedan, when, with a stone in his bladder, he remained on horseback throughout that fateful day. But of "spontaneous pain" Barthez says he was very intolerant. He was subject to cutaneous neuralgia, which made him "indescribably impatient." He reproached the physicians for the failure of their remedies and was inclined to put his trust in any quack he came across. Barthez gives an example of the methods that had to be adopted by an official doctor to make his services acceptable to capricious royal personages. He says: "The Empress was pleased the other day to wet her feet badly. She lunched without changing her shoes, and after lunch did not wish to disturb her attendants, who were reposing. So she kept on her wet shoes, with the result that she caught a tremendous cold, which starting from the nose descended to the throat, then to the bronchi." With some difficulty Barthez induced her to interrupt her course of sea bathing, but she insisted on accompanying a water party on the Nive. There was first a drive in an open carriage, then a sail lasting two good hours, and finally the return in the evening in an open carriage from Bayonne to Biarritz after sundown. Barthez forbade the trip, and even threw himself in mock-heroic style at the feet of the Empress. She raised him up, punctuating her refusal to obey with a playful slap on the face. Barthez was forced to go in one of the boats. He salved his professional conscience by having a sedative potion made up; this he gave to a gentleman who was to be in the Empress's boat, begging him to make her take it on the way. He thought it likely, however, that the physic was thrown into the river. Barthez, it may be added, was a physician of the highest distinction, who long afterwards ministered to M. Thiers in his last illness. He announced the death of the ex-President to the widow in the graceful phrase, *Madame, votre illustre mari a vécu.*

ANTIQUITY OF THE HUNGER STRIKE.

THE hunger strike is not an invention of the suffragists, although they may, perhaps, claim the introduction of it as a means of release from prison. In the JOURNAL of May 10th (p. 1010) we cited the case of John Scott, who in the sixteenth century, while confined in David's Tower in Edinburgh Castle, abstained from meat and drink for thirty-two days in order to show that he was under the special protection of heaven. But hunger striking is a custom of great antiquity. In a letter published in the *Tablet* of May 10th a writer, who signs himself "Anglus," points out that in an article on the "Ascetic Traditions of the Celtic Church," which appears in the current number of the *Irish Eccles Record*, Dom Gougaud, of Farnborough, mentions "a legal institution of ancient Ireland—the procedure of fasting. Having exhausted all legal means to conquer the resistance of a powerful doctor, his creditor had only one means of constraint left to him—that of standing before the door of the debtor and of refusing to take nourishment till the debt had been paid. If the debtor allowed the person fasting to die of hunger he was responsible for his death and had to pay his family a considerable indemnity in addition to the original debt. This was called 'fasting *against* or *on* a person.'" Dom Gougaud adds that in no Christian society to his knowledge has there been made such frequent and daring use of this curious process as in mediaeval Ireland. The custom is frequently mentioned in the Brehon laws. Fasting seems to have been practised when it was desired to turn a heathen king into a Christian, and the monarch, if hard of heart, counter-fasted as a means of protecting himself against conversion. It is recorded that St. Patrick "fasted upon" Loegaire, the heathen over-king of Ireland, until the latter embraced Christianity, and in accordance with the superstitions of the times the king and his family felt it incumbent upon them to fast at the same time until this test of endurance was won by the saint. The custom of hunger-striking for the same purpose was formerly common in India, but it is now almost obsolete. It is known in the East as dharna (or dhurna) baithna, or "sitting dharna." It was chiefly resorted to in order to force payment of a debt. The creditor would sit at the debtor's door and taste no food until his claims were satisfied. If the debtor allowed the creditor to starve, it was believed that he laid himself open to supernatural punishment, especially if the starver happened to be a Brahmin; accordingly, Hindus of lower caste would sometimes engage a Brahmin to starve for them. The custom was much abused, being utilized to levy blackmail upon persons who were not debtors at all.

THE PASSING OF THE CHINESE OPIUM TRADE.

WE have repeatedly pointed out in these columns that the time was at hand when the Government would be compelled by the force of circumstances to announce a new departure in the matter of the Indo-Chinese opium trade. The debate in the House of Commons on May 7th furnished the occasion, and Mr. Montagu, the Under Secretary for India, made what had become the almost inevitable announcement that the Indo-Chinese opium trade is to be brought to an end. Still, under the treaty of 1911, Great Britain has the power, if she had the will, to sell China many thousands of chests of opium up to and including the year 1916. But, as was pointed out in the JOURNAL of January 18th, there is at the present time in the Chinese ports a glut of Indian opium, the profits from the sale of which by the Indian Government have gone to swell the record surplus of the Indian budget. Meanwhile the Chinese Government, recovering from the dislocation of the revolutionary period, is pursuing a policy of suppressing both poppy-growing and opium-smoking with sincerity, and indeed with Draconian severity. With a falling demand and huge accumulations in the market, it was idle to pursue the policy previously announced by the Government of maintaining 200,000 acres under poppy cultivation in India. A virtue has accordingly been made of necessity, and after the present stocks have been—as it is euphemistically put—"absorbed" by China, at the rate of 2,000 chests a month, and if China continues steadfast in well-doing, not a single ounce of the product of the Indian poppy is ever again to be sold to the citizens of the young republic. But for this new announcement some 43,000 more chests of Indian opium would have been sent to China under the rather illogical provisions of the treaty of 1907 as revised in 1911. This passing of the opium question, while removing a long-standing reproach from our Indian policy, will give additional point and importance to the steps which we

understand are now being taken towards ratification of the International Opium Convention of 1912. Evidence abounds to show that the vice of morphine taking, the Western analogue of the opium smoking of the East, is only too readily accepted as a substitute for the latter when active suppression of that practice has been attempted among Oriental nationalities. The imports of morphine and cocaine into China and India, both licit and illicit, are of a magnitude quite incompatible with any medical or legitimate use. Statements recently published have shown that on the Continent of Europe and in America far more stringent control in the traffic of these and other "drugs of addiction" is imperatively demanded. The shutting down of the Indo-Chinese opium trade will doubtless make more profitable than now the traffic in these alkaloids which is devastating the bazaars of the East. The International Convention drawn up at the Hague in 1912 by the twelve Powers which participated in the conference provides for the necessary international arrangements to secure a world-wide co-operation with a view to restrict to legitimate uses the manufacture and distribution of drugs thus liable to abuse. It is reported that next month representatives of all the Powers which have since January, 1912, signed the Convention will meet at the Hague, at the invitation of the Netherlands Government, with a view to proceeding as speedily as possible to ratify and give effect to that Convention. The new policy of Great Britain in the Far East just announced will be an earnest of the seriousness of her purpose, and at the same time will render more necessary than ever that international co-operation which it is the main object of the Opium Convention of 1912 to secure.

THE HARD CASE OF THE MANX CONSCIENTIOUS OBJECTOR.

A NOTABLE victory for vaccination has been achieved in the Isle of Man. The Legislature of the island consists of a lower chamber, the House of Keys, and an upper chamber, the Legislative Council. Early in the year a Vaccination Amendment Bill, allowing exemption on grounds of conscience, passed the House of Keys, and, in accordance with ordinary procedure, was sent to the Legislative Council, which decided to hold an inquiry for the purpose of taking expert evidence. Dr. Hadwen (Gloucester) attended on behalf of the antivaccinators and Dr. Drury (Halifax) for the defence of vaccination. Three doctors resident in the island also gave evidence. An official report of the whole of the evidence has been issued and will be found useful and instructive to all interested in the controversy, as the case for vaccination and the case against it are clearly stated. The examination of the witnesses by the members of the Council showed the earnestness and ability with which the inquiry was conducted. By a unanimous vote the Council rejected the bill. Judging from the reports in *The Isle of Man Examiner* and *The Isle of Man Times* no one of the speakers appeared to have had any difficulty in arriving at the decision to vote against the bill. The Attorney-General is reported to have said, "Taking the evidence of the strong witness on the antivaccination side—Dr. Hadwen—it convinced him that there was absolutely nothing in the case against vaccination." Dealing at length with Dr. Hadwen's evidence regarding vaccination and syphilis, the Attorney-General said, "If this inquiry had served no other purpose it had been well worth undertaking in that it had dispelled such a hideous bogey. There was not the slightest vestige of evidence to show that there was any such danger. . . . Not a case of syphilis being caused by vaccination with calf lymph could be produced, and the danger alleged entirely broke down." The Governor (Lord Raglan) made some severely critical allusions to Dr. Hadwen's evidence. He is reported in the papers mentioned to have said "that he had heard with the greatest possible regret expression given to sentiments which he could not allow to pass." He referred to the very unfair and what he ventured to think was the extremely unwarranted attack made by Dr. Hadwen on the medical profession. "There was no profession in the world—there was no class of men in the world—so conscientious, or that did so much to assist charity or the poor as the medical profession. . . . To say that there was a conspiracy among the doctors to bolster up vaccination solely in view of the fees to be derived from vaccination seemed to him (the Governor) to be utterly unworthy of a man in Dr. Hadwen's position, and it was with the greatest possible regret he (the Governor) heard him make such a statement." The inquiry provided Dr. Hadwen an opportunity to distinguish himself, and advance the case againt vaccination. What actually happened is reflected in the remarks of the Attorney-General and the Governor just quoted. On page 1069 a relatively brief epitome is published of the evidence of Dr. Hadwen and Dr. Drury taken from the official report (published by Messrs. Brown and Sons, Ltd., "Times" Buildings, Douglas, Isle of Man). Gratitude is once more due to Dr. Drury for the public spirit which induced him to give the Legislative Council of the Isle of Man the assistance which his unsurpassed acquaintance with the history of vaccination and with the methods of antivaccinists so well qualified him to afford. His action on this occasion involved not only large expenditure of time but a certain risk to health, as he was at the time suffering from an attack of indisposition which would have more than justified him in declining to make the journey at a rather inclement season. Fortunately no ill effects ensued and he has the satisfaction of feeling that he has discharged a public duty with complete success.

THE FEELING OF UNREALITY.

THAT descriptive master of morbid psychology, Edgar Allan Poe, has done much to reveal in flashes of genius many of the dark places of the human soul, and the tortures endured by a diseased imagination. But we are only now becoming fully alive to the fact that these things are not bodied forth from the imagination of the poet alone; they are daily facts with which the physician in ordinary practice has to deal. We can look for no assistance from the result of ordinary physical examination in these cases, and almost invariably the systemic examination is negative. Courtney[1] of Boston in this connexion quotes the case of a Russian Jewess, aged 25, who suffered from a condition which may be best described as "a feeling of unreality." There had been no actual insanity in the family, although a brother had been the victim of a variety of "phobias" and obsessions. The condition appears to have developed after the operation of curettage following a miscarriage, and rendered the life of the patient a burden to her. She felt as if her body had been entirely transformed. From morning to night she had to keep up an argument with herself to prove to her satisfaction that it was "her voice with which she talks, her hands with which she grasps things, and her legs which carry her about." There was a numbness of all the faculties of sensibility, and she asserted that she never felt cross, tired, or hungry. An examination of the nervous system showed that the ordinary reactions were normal and sensibility well preserved. The latter fact has been seized upon by some psychologists to affirm that this feeling of unreality is purely ideational in its action. The author criticizes Janet's view that this uncanny feeling results from the loss of a special intellectual operation—"the function of the real." The first form of this function of the real allows us to deal with external objects and metamorphose reality; its last form is concerned with the constitution of time—the formation in the

[1] *Boston Medical and Surgical Journal*, February 6th, 1913.

mind of the present moment. Courtney criticizes this theory severely. According to him it means "that the highest grade of intellectual activity is required to be able to realize that one is awake and thoroughly prepared at all times to cope with the ever-changing social complexities of everyday life." To the victims of the feeling of unreality the present is by no means vague. His difficulty with regard to time lies rather in the realm of feeling. He may know that it is noonday, but he cannot *feel* that it is. That the function of the real is, as claimed by Janet, of high intellectual value is disproved in these cases by the fact that such patients are by no means intellectually defective. It is in the unequal struggle between the intellect and the emotions, in which the latter are nearly always victorious, that the patient's failure to respond to the call to action lies. The expressions, "I feel like myself," or "I don't feel like myself," suggest, says the author, a contrast between the totality of bodily sensations which constitute "the ego" of the moment and a standard feeling of self-reality. Courtney regards the feeling of unreality as arising from "a lack of vividness and coherency of relation in the primary sensory and sensorial elements which in their totality constitute the ego—the personality—of the individual. Examination of the individual sensory and kinaesthetic elements of feeling, even if the result is normal, is no argument, according to him, against this view, as it is impossible to judge of any complex associative affect by the primary sensational elements composing it. The "feeling of unreality" is not itself a clinical entity, but constitutes a symptom of that complex adynamic state of the nervous system which is termed psychasthenia.

OPHTHALMIA NEONATORUM.

A memorandum has been published by the Medical Officer of Health of Glasgow submitting a report by Dr. Florence Mann on the recent experience of the department in dealing with ophthalmia neonatorum. The report covers a period of seventeen months, during which time 341 cases occurred; this is equal to 9.4 per 1,000. In only 31 per cent. of the cases was the gonococcus recovered, but as the taking of swabs becomes more usual it is thought that a higher percentage will be obtained. It is usually regarded as being present in about half the affected cases. In at least 9 per cent. of the cases syphilis was also present, and in contrasting the results of the eye affection in children with and without syphilis Dr. Mann shows that of the non-syphilitic cases 81 per cent. made an absolute recovery, but of the syphilitic cases only 48 per cent. Total blindness followed in 1.2 per cent. of the former and 8 per cent. of the latter. This observation is most significant. In 3.5 per cent. the symptoms developed within twelve hours of birth, 56 per cent. occurred within the first four days, 3.2 per cent. after the fourth day, and 8.5 per cent. after the eighth day. Treatment at home was found to be unsatisfactory in many instances, and such cases were admitted to the reception home. Dr. Mann came to the conclusion that it was wise and even advisable in many instances to take the children into the home without the mothers. Under these conditions the children did well. Written directions are issued by the department for the guidance of the nurses attending the cases. The report brings strongly into view the fact that the disease is very amenable to treatment, and that if this be commenced early enough few cases will be lost. If, however, in the early stages treatment be inefficient there is no disease more liable to produce permanent blindness.

UNUSUAL SOURCES OF POLLUTION OF WATER.

In the majority of instances there is not much difficulty in locating the source of gross pollution of public water supplies, but instances occur from time to time which puzzle even the most careful investigators. Examples of some unusual causes of pollution were lately given by Dr. J. C. Thresh in a contribution to the Institution of Water Engineers. In one case in the water from a deep well in the new red sandstone *B. coli* were found in 10 c.cm. An examination of the surroundings did not suggest a solution, but the source of the pollution was eventually found to be in an iron tank under the engine-house floor, into which the water was first pumped and then forced to the reservoirs. The water in the tank was covered with dust, and appeared greasy, and the sides of the tank were coated with slime, which on examination bacteriologically was found to be a mass of bacteria of objectionable type, including myriads of *B. coli*. In another case, in which the water taken from a house tap was found to contain *B. coli*, the pollution was shown to be in the tap itself, which was placed over the kitchen sink; when the finger was placed in the nozzle of the tap it brought away a slimy mass of filth resembling sago, which proved to consist almost entirely of bacteria. The filthy condition of hydrant boxes was responsible for the pollution of particular mains in one district and bird-droppings from trees surrounding a reservoir in another. The leaking tank of a gas-holder situated 100 yards from deep wells, giving a large public supply, was considered to be the cause of pollution in another district. A peculiar odour was observed in the water when large quantities were drawn, but this entirely ceased, and the water became normal after the gas-holder had been put out of use.

A MEDICAL SKYSCRAPER.

The doctors of New York are to have a skyscraper of their own. It is to be a structure of thirty-five stories, and will consist mainly of suites of offices for physicians, surgeons, and dentists. On the top floor will be a fully equipped operating room for the common use of the tenants. There will be vacuum cleaning throughout, together with an ample electric service for medical apparatus. Four lifts will be installed, and on the ground floor will be found waiting-rooms and shops for druggists and purveyors of other medical supplies. There will be an inner court with a turntable for ambulances. This skyscraper is to be known as the Professional Building, and will be situated at the south-east corner of Seventy-Second Street and West Avenue. The building is to be begun in June and finished by the spring of 1914.

THE STAFFING OF TUBERCULOSIS DISPENSARIES.

We notice in the *South-Eastern Herald* of May 9th a letter from Dr. J. H. Keay on the appointment of a tuberculosis officer to the Greenwich Tuberculosis Dispensary. He points out that it was unanimously agreed at a meeting of the medical men practising in the district that the dispensary should be staffed by the medical men in the neighbourhood who had experience in the use of tuberculin, and that the general administration should be in the hands of the medical officer of health. The borough council unanimously adopted the findings of the meeting. The Local Government Board, however, in its craze for whole-time officers, stepped in and gave it to be understood that the work of the tuberculosis dispensary must be done by a whole-time officer, and refused to receive a deputation from the medical men in the neighbourhood to discuss the matter. The borough council meekly submitted to the Local Government Board, and, if Dr. Keay's information be correct, is about to advertise for a whole-time tuberculosis officer for the dispensary at a salary of £350 a year. The line taken by the medical men at Greenwich is in the main consonant with the tuberculosis scheme set out by the British Medical Association; since that was adopted the capitation fee of 6d. for all tuberculosis cases has been propounded by the

Treasury, so that the whole question of the treatment of tuberculosis is now in the melting-pot and in a very chaotic and unsatisfactory condition. If the salary of the whole-time officer is to be £350 we feel sure that a man of the high standing and special experience necessary for undertaking this work in sympathetic agreement with the medical men of the neighbourhood will not be found. The minimum salary suggested by the Association is £500 per annum, and this sum has been generally accepted throughout the country as a reasonable commencing salary. There is no good reason why the Local Government Board and the Greenwich Borough Council should endeavour to get a good man for less.

SCIENTIFIC ALLIANCE OF THE LATIN RACES.

AN association, called the Union Médicale Franco-Ibéro-Américaine has recently been formed in Paris for the purpose of uniting the doctors of the Republics of Central and South America with Spanish and French physicians in a scientific alliance of Latin races. From the initial letters of its title it is called for shortness "Umfia." The president is Dr. L. Dartigues; the general secretary is Dr. Gaullier l'Hardy; the vice-presidents, Drs. Bandelac de Pariente (physician to the Spanish Embassy in Paris), Manrique, and Delaunay. Among the members of the honorary committee are the Spanish Ambassador to the French Republic; Professor Ortega Morejon, member of the Spanish Academy of Medicine; Dr. Pulido, senator of Spain; Dr. Risquez, sometime rector of the University of Caracas, together with the Dean of the Paris Faculty, Professor Landouzy, and Professors Ch. Richet, F. Widal, A. Robin, Pozzi, Pierre Marie, Pinard, Legueu, Doléris, and Bazy, and Dr. Roux, Director of the Pasteur Institute. Membership is open to all doctors throughout the world who speak Spanish or Portuguese. At present there exist more than twenty autonomous nations of Spanish speech, and it is estimated that the language is spoken by more than a hundred million persons. It is proposed to establish a Hispano-American Hospital, to arrange scientific tours, and to make summaries of all medical papers written in Spanish available for members. The objects of the Umfia are to make its members known to each other, to establish relations, social and scientific, with the doctors of every country where Spanish is spoken; to establish an information bureau for Spanish or Portuguese doctors who go to Paris to pursue clinical work and research; to arrange courses of instruction, lectures, meetings, festivities and congresses, and to organize means of assistance to foreigners of Spanish-American origin settled in Paris who may be in need of help. Almost all the doctors of France who speak Spanish are members, and already the Umfia has official representatives in all the principal cities of Spain and South America. It is hoped that the association, which has been in existence only a few months, will before long have a membership of many thousands.

WE understand that the proposal recently made for the issue of half-yearly insurance cards is receiving sympathetic consideration, and may quite likely be adopted for considerable classes of cases.

ON April 25th a meeting was held in New York to take steps for the commemoration of the work of Dr. J. S. Billings. Dr. Weir Mitchell recited Dr. Billings's services as a surgeon in the United States Army during the Civil War; Sir William Osler spoke of his work in the library at the Surgeon-General's Office, and Dr. W. H. Welch dwelt on his ability as a hospital organizer. A tribute was also paid by Mr. Andrew Carnegie, who was for many years associated with Dr. Billings in the work of the New York Public Library.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Asylums Officers' Superannuation Bill Amendment.—This bill, to which reference was made in a recent issue, was introduced under the ten minutes' rule by Sir John Jardine on May 6th, and read a first time. It has been put down for second reading on May 29th. The Home Secretary has stated, in reply to Mr. Rowlands, that the Commissioners in Lunacy reported that the total number of day and night attendants and nurses, exclusive of head attendants and assistant head attendants, employed in the county and borough asylums in England and Wales on December 31st, 1912, was 12,337 (5,762 males and 6,575 females). Of that number, the proportion under one year's service was 23 per cent. (namely, male attendants 17 per cent., and nurses 29 per cent.); and the proportion over five years' service (excluding six asylums open less than seven years, where 655 attendants and nurses were employed) was 37 per cent. (namely, male attendants 52 per cent., and nurses 24 per cent.).

Feeble-Minded or Epileptic Poor.—Mr. Staveley-Hill asked for the names of the counties in which guardians had made application to the Local Government Board for Orders for the formation of joint committees of boards of guardians for the purpose of provision and special accommodation for, or special treatment of, the feeble-minded or epileptic poor.—Mr. Burns said that an Order had been issued for a joint committee of guardians in the county of Wiltshire. Orders were in preparation for the counties of Cornwall, Essex, Glamorgan, Salop, Staffordshire, and Warwickshire, and applications had been made by the counties of Kent, Suffolk, and Surrey. It was understood that schemes of combination were also under consideration in several other counties.

London Hospital: Employment of Nurses.—Dr. Chapple asked whether the Prime Minister intended to introduce legislation to prevent the London Hospital from sending out nurses one year before the expiry of the normal course of training required by every other great metropolitan hospital at the rate of 11s. 6d. a week while they earn £2 2s. a week for their hospital? Mr. Harry Lawson asked the Prime Minister whether he was aware that Mr. Sydney Holland, chairman of the London Hospital, flatly contradicted the first part of the statement when it was first made; whether he knew that the London Hospital trained its nurses free of charge or premium for two years and made a large loss on the whole transaction; and whether, when the nurses were properly equipped, they were able to earn a livelihood for themselves at the expense of the hospital.—The Prime Minister said: "I have not heard; and, with all respect to my hon. friend, I rather deprecate questions of this kind relating to a great London hospital, to which the metropolitan community is under a deep debt of gratitude. I am not aware of any grounds for legislation."

Forcible Feeding.—In reply to Mr. Thomas, Mr. McKenna stated that prison medical officers did not receive extra payment for operations performed in His Majesty's prisons, and that the question of additional payment for forcible feeding did not arise.

Sewage and Trade Effluents Bill.—In reply to Mr. Sherwell, the President of the Local Government Board said that he hoped to be able to introduce the proposed bill for dealing with the question of sewage and trade effluents during the present session.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

MR. WILLIAM M'EWAN AND THE M'EWAN HALL.

THE great memorial of the late Mr. M'Ewan's interest in the University of Edinburgh, and of his princely generosity to it, is the hall in Teviot Place which bears his name, and which completes the massive pile of buildings known as the Medical School. Here, on the site of the house in which Dr. Archibald Tait, one time Archbishop of Canterbury, was born and brought up, there now stands the M'Ewan Hall, in which graduation ceremonies and other academic functions are celebrated. Mr. M'Ewan, whose death took place in London on Whit Monday (May 12th), was born at Alloa in 1827, was educated in Alloa Academy, and, after that period of years (which seems to be almost essential to the great success of a Scotsman) in which he was thrown on his own resources, he found himself in his uncle's brewery business in Edinburgh (that of Messrs. John Jeffrey and Company). Soon, however, he ventured to start brewing on his own account, and with a capital of £2,000, one half of which was a cash credit from the bank, he founded the great brewing concern in Fountainbridge, Edinburgh, which is now known well nigh over all the world. In 1886 Mr. M'Ewan was returned to Parliament for Central Edinburgh, as a Liberal supporting Mr. Gladstone's Home Rule policy; and he represented that division of the capital of Scotland until 1900, when in consequence of failing strength he did not seek re-election. It was during this term of years that Mr. M'Ewan made his great gift to the University. In the early eighties of the last century the new Medical Buildings, made necessary by the rapid increase in the number of medical students attending the classes at Edinburgh, were completed at a total cost of £245,000, a large part of which was raised by public subscription. No graduation hall, however, was forthcoming, and it was felt that the public ought not to be again approached for financial aid so soon. It was then that Mr. M'Ewan came forward and agreed to defray the whole expense of the hall. It was designed by Dr. Rowland Anderson, in the Italian style of Cinque Cento period, with an interior fashioned in the form of a Greek theatre, and with wonderfully fine mural decorations by Palin of London; it cost, not £40,000 as was expected, but £115,000, but the whole amount was cheerfully given by Mr. M'Ewan. It took ten years in the building, and was opened in 1897. At this time also the freedom of the city was conferred upon Mr. M'Ewan, and some years later (in 1907) he had the honour of being made a Privy Councillor. For many years he had resided in London, and since the death of his wife, in 1906, his Edinburgh residence in Palmerston Place had seen him hardly at all. His name, however, is indissolubly linked with that of Edinburgh University, and his gift stood out in 1897 as the greatest benefaction that institution had received from any one man by his own act and in his own lifetime.

FIFESHIRE MEDICAL ASSOCIATION.

The spring meeting of the Fifeshire Medical Association was held at Dunfermline on May 9th, Dr. Alan Tuke, Dunfermline, presiding, when Dr. Edwin Bramwell, Edinburgh, gave an address. Thereafter, permission having been granted by the Admiralty and by Messrs. Easton, Gibb and Son, the contractors, the members were conducted over the works at Rosyth Dockyard. On returning to Dunfermline the party dined at the Royal Hotel.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

FUNDS OF DUBLIN HOSPITALS.

AT the recent annual meeting of the Meath Hospital and County Dublin Infirmary it was reported that owing to the increase in the indebtedness of the hospital either some of the invested funds would have to be sold or some of the beds closed. The income from legacies was practically sufficient to cover the excess of expenditure over the income from the subscribers, but last year there was a drop in the legacy income from £1,000 to £500. Many of the other Dublin hospitals are finding the same shrinkage in their funds, and one of them is just about to issue a special appeal, as it finds that many of its usual subscribers are failing to send their subscriptions this year. In a "boom" year, when charitable subscriptions might be expected to be heavy, there can be only one explanation for their extraordinary smallness, and the explanation is the Insurance Act. The Act appears to be destroying the system of voluntary charity. If all employers are compelled to insure their employees against sickness, few will care to make a second payment to the voluntary institutions which wage war on sickness. The decline in charitable legacies is probably in part due also to the heavy increase of death duties in recent years.

ST. JOHN AMBULANCE BRIGADE.

A meeting of the St. John Ambulance Brigade was held in Dublin last week to consider the arrangements for the Dublin Ambulance Challenge Cup Competition. It was decided to hold the competition on June 21st in Lord Iveagh's gardens, which he kindly offered. It was announced that Messrs. Jacob had offered to present medals to the winning team. It was also announced that with the object of promoting ambulance work amongst women resident in Ireland, the Hon. Mrs. Ernest Guinness had promised to present a silver challenge cup to the St. John Ambulance Brigade to be called the Irish Women's Ambulance Challenge Cup for annual competition between teams of four women who are holders of the first aid and nursing certificates of the St. John Ambulance Association and who belong either to the St. John Ambulance Brigade, Voluntary Aid Detachments, or St. John Ambulance Centres. It was decided to hold this contest also on June 21st.

INSANE PATIENTS IN WORKHOUSES.

In view of the action, reported last week, of the Committee of Management of the Richmond Asylum with regard to the Mental Deficiency Bill, the memorandum of inspection forwarded to the South Dublin Union by the Local Government Board is of special interest. The memorandum stated that notwithstanding the transfer of 58 patients to the Richmond Asylum since May, 1912, the number of patients in the lunatic wards of the workhouse had increased from 198 to 202. It was incumbent on the guardians to consider without delay the serious state of dilapidation into which many of the buildings had fallen. Apart from their unsuitable character and overcrowded state, and the risk of fire, they were in such a condition structurally as to involve danger to life in the event of a high wind. Since the last inspection 233 patients had been admitted to these wards and 100 discharged, in addition to those transferred to the Richmond Asylum, while 71 had died; and of those remaining, 15 were classified as insane epileptics, and 43 were stated to suffer from congenital mental weakness.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

MANCHESTER AND DISTRICT.

NEW SANATORIUM FOR SALFORD.

THE Salford Health Committee has issued an important report with reference to the provision of sanatorium accommodation for tuberculous cases. In order that no time might be lost in providing hospital and sanatorium treatment for insured persons and others suffering from tuberculosis, the town council some months ago resolved to utilize the Drinkwater Park Hospital, which has in the past been used only for cases of small-pox. It was fully recognized at the time that the situation of Drinkwater Park, in the valley close to the river Irwell, was not an ideal one for tuberculosis, and some strong criticism was directed against it which would have been fully justified if it had been intended as a permanent sanatorium. But the Health Committee and the Insurance Committee felt bound, owing to the number of applica-

tions for sanatorium treatment, to make some temporary arrangements, and the Drinkwater Park buildings being unoccupied were altered and adapted and pavilions erected at a cost of several hundred pounds. A few weeks ago the institution was visited and inspected by the Insurance Committee, and the opinion was expressed that everything was being done to meet immediate requirements. There was accommodation for thirty-five beds, and at the time of the committee's visit thirty patients were in residence, and the report of the medical officer as to their progress was most satisfactory. In the meantime the Health Committee has been in search of a better site for the erection of a permanent sanatorium, and the report just issued states that it has now had the offer of a freehold site known as Rab Top Farm, Rose Hill, Marple, for the sum of £2,500 with £100 for expenses. As the site contains about 65 acres this is at the rate of about £40 an acre, and the site lends itself readily to the erection of a sanatorium of a hundred beds. The committee thinks that such a sanatorium could be erected for about £15,000, and it is expected that the Local Government Board might contribute out of the fund set aside for this purpose by the Treasury between £8,000 and £9,000 towards the capital cost. The cost of maintaining such an institution is estimated at about £7,700 per annum, and towards this the committee expects to receive about £2,000 from the Insurance Committee and about £2,850 from the Hobhouse grant. This leaves the corporation to provide out of the rates about £2,850 a year. The Health Committee therefore recommends the council to accept the offered site, and to proceed as early as possible with the erection of a sanatorium. The proposal will be considered at the meeting of the town council to be held next week.

India.

[*FROM OUR SPECIAL CORRESPONDENT.*]

SANITARY EDUCATION IN BOMBAY.

AN appeal for funds towards the establishment of an Indian sanitary institute in Bombay has been published, the idea being to develop the admirable work done by the Bombay Sanitary Association for the past ten years by building a suitable institute in Princess Street. It is to form the head quarters of the association, and house a health museum and library on the lines of the Royal Sanitary Institute in London, providing also lecture and class rooms where courses of lectures and practical demonstrations of elementary sanitary science will be given.

THE HEALTH OF THE CITY OF BOMBAY.

The population of Bombay was ascertained by the census of 1911 to be 979,455, an advance of 1,623 (1.5 per 1,000) on the census of 1906. The proportion of females was 35 per cent. The conditions of the year 1911 were favourable to health. The birth-rate—21.8 per 1,000—was the highest on record. The number of stillbirths registered was 1,759. The death-rate was 35.6 per 1,000, which is considerably below the average of the previous decade. Infantile mortality was 379.8 per 1,000 of births, against 413.9 in 1910. Ten visiting nurses and midwives are employed by the municipality for purposes of aid and instruction, with excellent results. The diseases to which mortality is mainly due are, in order: Plague, respiratory diseases, fevers, tubercle, bowel complaints, small-pox, measles, and cholera. As compared with the preceding decade, there has been a saving in 1911 of 9,889 lives, a decrease under the headings of plague, fevers, bowel complaints, tubercle, small-pox, and cholera, but an increase under chest diseases and measles. The visit of the King caused for a time a great overcrowding, but no evil result followed. The report of the health officer, Dr. J. A. Turner, D.P.H., is very elaborate, and gives evidence of good and progressive sanitation.

SANITATION IN DELHI.

The difficulties in the way of the sanitarian in Delhi are very great, and a leading Indian journal points out that, whilst New Delhi is prominently in the public eye, it is well that Old Delhi should not be overlooked. A campaign against the uncleanliness and unhealthiness of this walled city and its suburbs has already been organized. The death-rate of the city exceeds the birth-rate—in the year just closed the former was roughly 50 per 1,000 and the latter 45. If there was no flow of immigration, the population of the city would be on the decline. Moreover, last year 37 per cent. of the 10,974 children born died before they were 12 months old. In this connexion it might be urged that the ignorance of mothers has more influence on the death-rate than a lack of sanitation, but it is significant that in the healthiest ward the infant death-rate is comparatively small. If more were needed to emphasize the case for reform, one has not far to look. The flies that abound, not only in the city, but overflow into the Civil Station, are testimony that cannot be shaken—flies cannot exist without dirt. To a sanitarian desirous to demonstrate the value of his science, the problem of Delhi, despite its magnitude, must present many attractions. Here is virgin soil—if the associations permit such a figure of speech—offering unlimited scope for work. The reformer will start with the advantage that the influence of a supreme Government urging haste is on his side, and that it will not be his lot to be standing impatient whilst a sceptical municipality doles out much-grudged funds.

HAND TRANSPORT FOR SICK AND WOUNDED IN THE INDIAN ARMY.

There is good reason to be proud of the organization of the army in India, but no one would contend that in some directions there is no room for improvement. One particularly glaring defect is the hopelessly inadequate number of trained dhooly-bearers. At present on manœuvres or mobilization a large proportion of the men enlisted, or rather hired, as dhooly-bearers are absolutely raw coolies, often the riff-raff of the bazaar. In physique and character these men are entirely unsuited to the work, and their discipline is *nil*. During the recent medical manœuvres they proved hopelessly inefficient, several deserted, and on the final day, when it rained hard, the whole of the men attached to two field ambulances disappeared *en masse*. We believe that in the final conference General Sir James Willcocks commented strongly on the unfitness of the men for the duties they were expected to perform, and it is to be hoped, therefore, that steps will now be taken to provide properly trained dhooly-bearers in adequate numbers.

THE HEALTH OF CALCUTTA.

The census of 1911 revealed an increase of 5.7 per cent. in the population of Calcutta. Of the 896,067 inhabitants 68 per cent. were males, and 32 females. The increase of the male population was 8.2 per cent., and of the female 1.1. The increase was entirely due to immigration, as the death-rate habitually exceeded the birth-rate. The birth-rate of 1911 was 21.7 per 1,000 of the population—the highest ever recorded. Vaccinators are now employed as sub-registrars of births and deaths with advantage. Still-births numbered 1,216, against 1,033 in the previous year. The death-rate was 27.2, the lowest hitherto recorded. Infantile mortality was 251 per 1,000 of registered births—a decrease attributed to the increase of registered births. "The city suffered considerably less from epidemic diseases than in previous years." There were only 41 deaths from small-pox and 88 from measles; cholera and malaria were less fatal, but plague, bowel complaints, and tuberculous diseases showed a slight rise. There were only 20 deaths from epidemic dropsy, which in recent years has been so severely prevalent. The health officer, Dr. Pearse, remarks: "There is no evidence that the diet of the people has been changed, and milling of rice goes on exactly as before."

Jamaica.

IS YELLOW FEVER ENDEMIC?

DR. ANGUS MACDONALD, Medical Officer of Health for Kingston, Jamaica, in a paper read before the Jamaica Branch of the British Medical Association, discusses the question, "Is yellow fever endemic in Jamaica?"

His paper appears to be a reply to the report of Captain Potter, who maintains that yellow fever was endemic in

Jamaica and expressed the opinion "that there is no justification for the use of the term 'vomiting sickness'; it is not a separate clinical entity. I am of the opinion that the majority of deaths ascribed to the so-called 'vomiting sickness' are due to yellow fever."

Dr. Macdonald analyses Captain Potter's report to show that this has not yet conclusively been proved. Out of 73 cases personally investigated by Captain Potter 35 are admittedly cases of some other condition, while of the 38 cases left Dr. Macdonald considers that there was not one in which the *post-mortem* evidence was typical of yellow fever. Of 73 cases of vomiting sickness investigated 35, he maintains, were due to some definite condition other than yellow fever, and the conclusion is drawn that medical men should be chary in making a diagnosis in any case of vomiting, especially in childhood.

Dr. Macdonald's reasons for his conclusion that yellow fever is not endemic in Jamaica are:

1. In the absence of definitely typical cases for a period of years it may be that all cases have been stamped out and reimportation has not taken place.

2. The nature of the shipping of Jamaica in recent years and the quarantine methods in force render the importation of yellow fever difficult. The possibility of the introduction of infected *Stegomyia* is so remote as to be negligible; the seasonal prevalence of vomiting sickness in the cold months is marked, while the *Stegomyia*, though certainly more abundant after rains, is met with all the year round. According to records of epidemics, the seasonal occurrence of yellow fever has been in the hot months.

The few cases recorded in Kingston in 1904 were typical yellow fever in adults, imported probably from Central America and limited to a group of young adult males. That yellow fever is not now endemic in the island may require to be proved; but its absence in typical form from Kingston, where there must be thousands of susceptibles resident, and where thousands more migrant susceptibles yearly still get bitten by *Stegomyia*, is suggestive of, at any rate, extremely limited endemicity.

Correspondence.

RHEUMATOID ARTHRITIS.

SIR,—In reply to Dr. Bailey, I may say that I have given what I consider a perfectly clear verbal picture of rheumatoid arthritis, which I believe to be a distinct entity, and one which can be easily differentiated from other affections of the joints, an entity which can be prevented, and which can be easily cured if early recognized. I do not propose to go over this ground again; that it is not always differentiated from other forms of arthritis is a concern which should trouble the patients rather than myself. The other day I saw an extremely well marked case of osteo-arthritis affecting one hip and one knee-joint; the patient had a magnificent set of teeth, every one his own, and not an unsound one in his head, yet two London physicians had recently recommended the extraction of nine of these teeth for a supposed pyorrhoea alveolaris, which was not present when I saw him, or, at least, I failed to discover it. As they would not guarantee a cure, the patient wisely declined the operation. I was rather surprised that the less heroic treatment of a vaccine had not been suggested.

Dr. Bailey says "decalcification of bones is a common accompaniment of any bone inflammation; skiagraphs show it in tubercle, after fractures in the bone ends, in whitlow, in terminal phalanges," etc. It is plain enough what he wants to imply, but what does he prove? Does he confound disorganization of the joints with decalcification? Does he confound the relative transparency of cancellous tissue with decalcification? Decalcification "after fractures in the bone ends" is certainly a bad look-out for bony union; it is the kind of thing surgeons would rather not see. A bone may be destroyed without an acid, and, I may add, even without a microbe; the pressure of an aneurysm may make a big hole in the spinal column; a sarcoma, or the growth in myelopathic albumosuria may eat up the bone, but here we may possibly have to consider the electrical potential between the ions within and without the cells.

He is quite at liberty to believe that microbes may eat up the cartilages, and that "antibacterial treatment" is the correct card to play, but I can also exercise my right to estimate his beliefs at what I may consider their value —*nil*.

I do not question that many "laundry workers, scrubbers, workers in aërated water factories, hunting ladies, amateur lady gardeners, ladies who spend much time in washing laces" may get rheumatoid arthritis, but at the same time I have not the slightest doubt that hundreds of thousands of such individuals (though my practice and observation are not so extensive) never get and never have any intention of getting rheumatoid arthritis. When will medical men drop this *post hoc propter hoc* argument? I saw a man fall through a trap-door and break his neck after his breakfast, but I never thought that his breakfast had anything to do with the fracture.

"Treatment locally by radiant heat and iodine ionization for a month or on alternate days for two months" seems to me a laborious employment; it is, however, one which does not strongly commend itself to me. But why only two months? Why not as long as the patient's purse will hold out? The disease will certainly survive much more than two months of such treatment.

Dr. Preston King begins his letter with a testimonial to himself as to his large experience and interest in the subject, from which I in no way wish to detract, but he must excuse me if I refuse to discuss seriously with him his hypotheses about conditions concerning which he has even written a paper "to assert that there was no such disease as rheumatoid arthritis." Why, then, waste your space and your readers' time about a non-existent disease? He then proceeds to jumble all the joint affections together, and is willing to grant that there may be "in this great group of joint affections an inner group which may fairly be regarded as a distinct disease." Having set up this inner group, he then proceeds to mix it with pyorrhoea alveolaris and the gonococcus, so that we do not know where we are, and I must leave him to get out of his own muddle.

He quotes my statement that in the later stages the disease is curable, though not the deformities, and then adds "presumably by administering sufficient lime salts." What right has he got to saddle me with his presumption? If he would only take the trouble to read my address with an ordinary amount of attention, he would find that the first part of the treatment is to remove the cause, and until this is accomplished it is often very difficult to get lime into the tissues.

At this stage I think it would serve no useful purpose to enter into any discussion with him as to the passage from rheumatoid arthritis into osteo-arthritis, as it is evident that at the very outset we would differ as to what is meant by nature. I may, however, say that many cases of rheumatoid arthritis are cured by the removal of the cause in spite of treatment.

I cannot attach much importance to his interpretation of his skiagrams, seeing that he does not clearly differentiate between the different affections of the joints. I have not laid down any hard and fast rules as to which joints are first affected; and, again, if he takes the trouble to read my address carefully, he will find that the joint affection is only a part of the disease. He talks about poverty and plenty as causes of mild chronic acidosis. How is it possible to have patience with such a travesty of my statement? The following similitude may make the matter clear to him: Drunkenness is usually preceded by the absorption of alcohol, but it is not necessarily associated with either poverty or wealth. His remarks about marmalade and acid fruits may seem to him spicy, but no fair-minded critic would ever attempt to divorce this matter from its context. He talks as if my treatment consists solely in the administration of lime salts.

I must express my thanks to Dr. Percy Newell for his kind appreciation of my address and for his whole-hearted condemnation of the drugs which I, it appears, boldly ventured to ostracize in this disease. In my presidential address last year I predicted a bright future for the general practitioner: "In my opinion the future of medicine will rest with enlightened and highly educated general

practitioners—men who will look after the health of the community, who will see that mechanism of a high order is produced, and who will see that the machinery of the individual is properly lubricated, and not subjected to any unnecessary friction or strain. The enlightened public will look to their medical attendants as guides, philosophers, and friends both in health and disease." The sooner we cease to batten on disease and go in for prevention the better for the public.

Professor W. E. Dixon has drawn my attention to an article on The Pathology of Chronic Fluorine Poisoning, by Dr. Fritz Schwyzer.[1] Schwyzer records a case of chronic fluorine poisoning in a man, aged 33, brought about by taking up the poison in his food. He also conducted experiments on rabbits, guinea-pigs, and pigeons. He concludes as follows:

> In summing up, I wish to state that the main symptoms of chronic fluorine poisoning in man and animals so far experimented upon are the same. Abnormal increase of the myelocytes in the blood at expense of the number of the other leucocytes, partial change of the yellow bone marrow into red (so far seen only in animals, as my patient did not die), pain in the bones and joints, increased coagulability of the blood, and great deficiency of chlorine in the body.
>
> That there was an enormous increase in the output of calcium could be shown directly in man through the analysis of the urine and faeces, and in animals by determining the specific gravity of the bones.

As sodium fluoride is used as a preservative it may be as well to be careful about its employment. It may be within the recollection of many of your readers that many years ago hydrofluoric acid was highly vaunted in the treatment of exophthalmic goitre, but its uselessness in that disease was soon recognized. It may possibly have done some good in cases of fibrocystic endemic goitre.

The well-known decalcifying effects of oatmeal I have ascribed to silicic acid.

I wish now to draw the attention of your readers to an able paper in the *Lancet* of May 10th by Professor W. E. Dixon, being his contribution to the discussion at the Royal Society of Medicine on alimentary toxaemia—an extraordinary title, by the way, for which Professor Dixon is in no way responsible, but which cannot reflect much credit on those who gave it birth. Professor Dixon says:

> It is true that under certain conditions a kind of toxaemia may be induced from carbohydrate metabolism; for example, in certain conditions of the bowel an excess of lactic acid may be found leading to an excess of ammonium salts in the urine, and some four or five times the normal excretion of calcium; the result may be calcium starvation, of which one symptom is probably joint trouble.

—I am, etc.,

Liverpool, May 10th. JAMES BARR.

SIR,—Most clinicians who have paid special attention to the subject will agree with Sir James Barr as to the inefficacy of guaiacol carbonate and other drugs in this disease. At the same time considerable difficulty will be felt in accepting the view suggested by Sir James Barr—that the cause of the disease is a mild chronic acidosis which extracts the lime salts from the fibrous and other tissues. For my own part a close study of the disease has led me to accept as most likely the view condemned by Sir James Barr—that the disease is a toxic arthritis of bacterial origin. Sir James Barr brushes this view aside as resting on no firmer foundation than the imagination of some writers, and he goes on to deprecate hunting for the germ and its toxin. A study of the later part of Sir James Barr's admirable article presents what appears to be a curious inconsistency in his position. We find, for example, that the principles for successful treatment are laid down by him as follows:

(1) Attention to be directed to the *prima via*, all sepsis to be eradicated. (2) All acid fermentation in the stomach to be eliminated. (3) The administration of medicinal substances, such as olive oil at night, and the regular administration of an aperient to keep the bowels open. (4) Leucorrhoea, if present, to be treated, and any infection of the urinary tract to receive attention, vaccines *often* proving useful in this class of case.

Now, taking these points seriatim, it seems clear that, consciously or unconsciously, the toxic or bacterial origin of the disease bulks much more largely in Sir James Barr's mind than he would have us believe. A bacterial origin of the disease is clearly suggested by his first principle; since acid fermentation in the stomach and bowel is most commonly the result of abnormal bacterial activity, an *a priori* case for the germ origin of the disease is established by his second principle. Further, since a very large proportion of the faeces consists of bacteria, it will be readily understood that drugs which accelerate the passage of the faeces through the alimentary canal will diminish the amount of putrefaction which takes place in the bowel from these organisms, and also limit the absorption of their toxic products; and, lastly, Sir James Barr's personal experience of vaccines often proving useful in cases of rheumatoid arthritis associated with infection of the urinary tract, is itself a proof of the value to the patient of the physician hunting for the germ and its toxin.

I entirely share the view put forward by Sir James Barr that rheumatoid arthritis as a prolonged disease is a standing disgrace to the medical profession, and if the principles of treatment so well laid down by Sir James Barr were universally recognized (and this involves a careful bacteriological examination along modern lines), this unfortunate position of affairs would soon be corrected.—I am, etc.,

Edinburgh, May 10th. CHALMERS WATSON, M.D.

SIR,—I often think that when writing on the etiology and treatment of rheumatoid arthritis we would do well to confine our observations to the disease as it is seen in young women. Then we should clear the ground.

Later on in life other varieties of chronic arthritis are met and often confused with the disease under consideration. This is hardly excusable even without the assistance of skiagrams, and yet how often we see osteo-arthritis and rheumatoid arthritis mistaken for each other. Thus it happens that treatment which may be of service for one of these diseases is extolled for both. We speak of iron anaemia and arsenic anaemia to distinguish between the remedies best suited for chlorosis and pernicious anaemia, so to-day we might borrow from that therapeutic definition and speak of iodine arthritis and calcium arthritis.

Those who have the patience to try iodine tincture in increasing doses for long periods in the treatment of osteo-arthritis (nodular rheumatism), as recommended by Trousseau in vol. iv of his *Clinical Medicine*, published as far back as 1872, will not be disappointed; but this treatment is perfectly useless in rheumatoid arthritis. Whether or not a mild acidosis is responsible for the decalcification of bones so often observed in rheumatoid arthritis I am unable to say, but I do know that this disease in young women is frequently benefited in no small degree by adding large quantities of milk to their diet.

In my own practice I endeavour to get these patients to take 3 or 4 pints daily in addition to their ordinary food, and I have seen the disease entirely disappear under this treatment.

What the prime cause may be we do not know, and whilst our ignorance is so colossal we must do the best we can, guided by the experience of those who have had most opportunity of studying the disease, but we have a right to expect that two entirely different pathological conditions should not be treated as one and the same malady.

—I am, etc.,

Bath, April 28th. T. PAGAN LOWE, M.R.C.S., L.R.C.P.

SIR,—Sir James Barr, in his letter in the JOURNAL of May 3rd, although professing to reply to my questions, fails to answer any of them. If Sir James Barr has no knowledge of the subject, may I tell him that the thermo-penetrating current has been in common use in Germany, Austria, and France for rheumatoid arthritis for many years? I have myself used it or seen it used many thousand times during the last five years, both in this and other diseases, with excellent results. The hot seaweed or other alkaline bath is, I fancy, almost as old as the employment of lime in the treatment of this disease. The hot alkaline bath is of itself of some value, and also, probably by increasing the absorptive powers of the skin, increases the value of the inunction when administered while the patient is still warm and damp after leaving the bath. Suitable inunctions to the spine and affected parts

[1] *Journal of Medical Research*, vol. x, p. 301.

are also very valuable when applied to the spine and affected joints, either when the parts are heated before a fire or even when applied at the normal temperature of the body. The best ointment to employ to the spine must vary. I may, however, say that I find milder counter irritants give much better results than the actual cautery or strong blisters, and have the further advantage that they can be almost continuously used; the patient in this way derives great benefit from the long-continued absorption of the medicament employed. Antirheumatic serums have been in use for over twenty years.

My objection to the employment of the calcium salts in rheumatoid arthritis is that they are neither good nor new. I remember in the year 1873 the late Sir Robert Christison gave his class a list of the various reasons different writers gave for using calcium salts in rheumatoid arthritis. He pointed out that some of the reasons were both plausible and ingenious, others rather stupid, and ended by telling us that after a prolonged trial his experience was he might as well have given his patients an infusion of straw. After forty years, in the *Medical Annual* for 1913, I notice that Hirschberg gives as his experience of treating a number of patients suffering from rheumatoid arthritis with a diet deficient in calcium, "that in a certain proportion a notable degree of improvement is obtained both in the mobility of the joints and in the relief of pain." I tried this treatment some years ago, but failed to notice any improvement.

I gathered from the cursory glance I gave Sir James Barr's address some weeks ago that he had either read about or employed vaccines in some forms of this disease, but I failed to notice any mention of antirheumatic serums.—I am, etc.,

Llandudno, May 4th. JAMES CRAIG.

THE INTERNEURONIC SYNAPSE IN DISEASE.

SIR,—Dr. Shaw's suggestion that in hysteria the neuronic trouble may be synaptic opens out one of the ways in which it may still be possible to bring into line the physiological and psychical conceptions of that disease.

Is it not more probable, however, that increased rather than diminished synaptic resistance is the cause of hysterical symptoms. The statement that "the hysterical temperament is manifested by an abnormally keen sensibility to all external impressions and sensations" is open to serious question. It is not in accord with the anaesthesia, loss of memory, paralysis, and diminished field of vision, which hold such an important place in the hysterical symptom complex. In the severe hysterical paroxysm the patient is often completely oblivious of her surroundings.

These facts are more in agreement with Janet's theory that hysteria is due to a diminished field of consciousness, and such a diminished field would be more likely to be brought about by increased synaptic resistances isolating more or less completely certain areas of the mind than by diminished resistances allowing impulses to run riot in all directions. The susceptibility to suggestion and lack of control are undoubtedly facts of the hysterical state, but these may be due to the cutting off of the higher controlling functions of the mind, reason, and will, and so are quite compatible with Janet's theory and increased synaptic resistance. Further, Dr. Shaw gives epilepsy as an instance of increased synaptic resistance causing an accumulation of energy which eventually bursts its bounds, causing an epileptic fit. This explanation has many facts to support it, but the phenomena of hysteria and those of epilepsy show several parallel features. In both we have fits characterized by an abnormal output of nervous energy, and in both we have an interparoxysmal period. The same explanation could therefore equally well be applied to both—namely, an undue accumulation followed by a sudden and violent output of nervous energy.

It is true that the phenomena are in detail very different, but this could be explained by assuming that different areas of the brain are involved.

Shock, which, as Dr. Shaw suggests, often appears to be a determining cause of epilepsy, is often also an important factor in the etiology of hysteria. If, in the case of epilepsy, the shock acts by causing "synaptic fusion" and consequent increased resistance, is it not possible that a similar process may be at work in hysteria?—I am, etc.,

Sheffield, May 12th. ARTHUR G. YATES, M.D., M.R.C.P.

THE FORM AND POSITION OF THE STOMACH.

SIR,—I had feelings of great astonishment and disappointment when I read Dr. A. E. Barclay's letter on this subject in your issue of May 3rd.

My quotations from his most recent writings on *x*-ray appearances of the stomach under varying conditions were surely extensive and consecutive enough to prevent any suggestion of misquotation. My previous communications on this subject indicate definitely where I locate the "middle sphincter." Dr. Barclay merely throws dust in the eyes of the reader and confuses the issue by saying that "apparently Mr. Gray claims all these sites as his middle sphincter." These sites are described by Dr. Barclay as "half-way down the stomach," "the lowest part of the organ," and "the middle of the body," and I interpreted these expressions as referring to one and the same situation. If this is not what Dr. Barclay meant then he is particularly unhappy in his choice of terms and in his descriptive powers. After all, the truth appears to be that he and I agree as to radiographic appearances presented in the stomach, but differ, widely it is true, as to the interpretation of these appearances. Nobody should be more willing than Dr. Barclay to admit that there is room for such disagreement, because his own writings indicate how frequently, in his own experience, operative findings show that his interpretations of the *x*-ray pictures have been delusive.

During this correspondence I have endeavoured to show (1) that the adoption of Dr. Hertz's suggestions regarding operative procedure in cases requiring gastro-enterostomy would entail retrogression, and (2) that the findings of radiographers of repute in different parts of the world are neither consistent nor conclusive.

Dr. Barclay, who has taken upon himself to reply to my letters, has entirely ignored, as has Dr. Hertz also up to this time, the very definite questions I put (1) with regard to discrepancies as to the positions accorded to the pylorus by himself and Dr. Jordan, to say nothing about the pelvic position given to it by Drs. Maclaren and Daugherty; and (2) with regard to the explanation of certain well-known clinical phenomena in the light of Dr. Barclay's "gravity theory." These are most important points, and I hoped that they would be taken up and answered without divergence into side issues. In the absence of such answer, I agree that "it is simply waste of time, ink, and paper" to attempt to forward the discussion, because it is apparent from Dr. Barclay's letter that "the subject lends itself to distortion," not merely "by those who are not familiar with normal appearances," but also by those who professedly are.—I am, etc.,

Aberdeen, May 10th. H. M. W. GRAY.

EXISTING UNSATISFACTORY CONDITION OF THE SCHOOL MEDICAL SERVICE.

SIR,—I had occasion recently to circularize a number of school medical officers in reference to the subject of salary, and I could not help being impressed by the large number of private communications I received from all parts of the country, in addition to the answers to my circular, expressing views almost identical with the letter published in the BRITISH MEDICAL JOURNAL of May 10th.

The manner in which the school medical service has been organized bids fair to create a most practical system for bringing about an almost ideal method of preventive medicine, which is certainly the common-sense way of dealing with disease. Moreover, it has apparently attracted many very able men to join its ranks, but unless there are some prospects of a fair living wage, similar to that of tuberculosis medical officers, it is more than probable the service will rapidly deteriorate.

There is a feeling among some people, who have little or no practical experience of the work, that any one who has a qualification to practise is competent to do it, but owing to its special and far-reaching nature this is by no means the case.—I am, etc.,

O. POLHILL TURNER, D.P.H.,
Hastings, May 12th. School Medical Officer.

SIR,—The remedy for the exceedingly unsatisfactory state of affairs in the school medical service described by the S.M.O. of Stoke-on-Trent in your issue of May 10th is indicated by the minutes concerning salaries of school medical officers contained in the SUPPLEMENT of May 3rd. No one can reasonably object to the commencing salaries of £500 and £250 laid down therein as the minimum salaries proper to be paid for senior and junior posts respectively. Unfortunately, however, the Association has not been able to secure the adoption of these salaries in practice. As a matter of actual fact, some responsible school medical officers were appointed at salaries that were the minimum proper to be paid to their assistants, and after four years they are still paid the salaries of junior officials, notwithstanding the responsibilities of their office and the fact that more than sufficient time has elapsed to make the necessary adjustments.

Under these circumstances the development referred to by your correspondent is not to be wondered at. In practice the status of the school medical service cannot be considered altogether apart from the salaries paid to its officials. If the school medical officer receives—as he frequently does receive—a salary utterly inappropriate to the importance of his work and to his responsibility, it is not surprising that the direction of his work tends to pass into the hands of laymen who happen to be better-paid officials.

Local authorities cannot, however, be altogether blamed in the matter, for the burden of medical inspection was thrust upon them at a time when they were most unwilling to incur any further financial obligations. But the fact remains, unfortunately, that the school medical service has been starved in consequence.

The Board of Education makes insistent demands upon education authorities for the efficient performance of medical inspection; and further, indicates the desirability of school hygiene being dealt with in its broadest aspect. The burden of all this falls upon the school medical officer, the chief concern of his committee being to limit the expenditure of money under this head. Among the economics thus practised, the school medical officer's salary is frequently the first to suffer.

It is earnestly to be desired, therefore, that school medical officers will themselves draw attention to the existing sweating of the school medical service. But it is not only in their own interests that complaint should be made of inadequate salaries. It is a matter of national importance that the status of the school medical service should receive adequate recognition by local authorities. Failing such recognition the service will almost inevitably suffer serious deterioration in the near future.—I am, etc.,

W. SPENCER BADGER,
S.M.O., Wolverhampton.

May 13th.

DEATH VACANCIES AND THE PANEL SYSTEM.

SIR,—May I make to you and your readers, with the hope that it may be eventually considered by the various Branches, what appears to me to be a practical and valuable suggestion?

It is only too true that the average practitioner, if stricken down in his earlier and responsible years, leaves behind him very little provision for the protection of those nearest and dearest to him. Prior to the incidence of the Insurance Act there was always a provision, small or large—unfortunately often small—derived from the sale of the death vacancy. With the incidence of the Insurance Act this provision may become very small indeed, for death will terminate the contract between the insured and the late doctor, and the former will be at liberty to go wherever he pleases, and I fear this will be seldom to the buyer of the death vacancy, and thus death vacancies will be valueless.

My suggestion is that, if a scheme were developed whereby the purchaser of a death vacancy was assured for twelve months of the possession of the panel patients of a deceased medical man, the provision for the widow and children would at least be a sum equal to the annual value of the panel patients—that is, at the present rate £350 a thousand.

All that should be necessary would be to bind all the panel men not to accept, under a penalty of £10, a patient the client on the insured list of a deceased colleague for twelve months after such a colleague's death. The carrying out of such a proposal would be equivalent to each man insuring himself to the amount of the annual value of his panel practice, and should find ready acceptance by all. There appears to me to be no difficulties in putting such a proposal into practice, as the means of discovering what the list of a deceased colleague was will be in the possession of his executors and in the Insurance Office.—I am, etc.,

H. B. PALMER.

Plymouth, May 12th.

THE PARISH DOCTOR AND HIS OPPORTUNITY.

SIR,—It appears to me that the crux of the whole matter is that these appointments are made by men who for the most part are entirely incapable of forming a just opinion on the merits of the different candidates, and they are often made a matter of—shall I term it—"expediency" between the different parties on the boards of guardians.

The remedy seems to be in the appointments being made by a select committee who would not be parties to the sweating principle that most boards adopt. Whilst agreeing that united action on our part is desirable, much also may be done by educated laymen on the board, and our influence should be brought to bear to support these men at election times, who are willing to serve from the highest motives of public spirit.—I am, etc.,

F. BRYAN,
Late Medical Officer and Public Vaccinator, Basford Union.

Ipswich, May 12th.

LECTURES TO VOLUNTARY AID DETACHMENTS.

SIR,—The British Medical Association has passed a resolution that the minimum fees paid to doctors for giving first aid or nursing lectures should be 5 guineas for each course, and some of the Divisions of the Association, including York, have recently passed similar resolutions.

Whilst fully agreeing that doctors should be paid a fixed uniform fee for these services to the general public, to railway companies, county councils, and factories, I strongly feel that services voluntarily given to a voluntary and patriotic movement in preparation for the defence of this country in time of peril and need should be given gratis—first, as an example to our fellow countrymen and countrywomen; and secondly, because there are no funds to meet these fees, and this good and useful work will be absolutely crippled and will consequently fall to pieces, and the profession blamed for it. Some form of compulsory service, combatant and non-combatant, may be necessary for the defence of this country, but until that becomes law we must not imperil the safety of our country by refusing to volunteer our services and discouraging others to volunteer.

I do not know whether the officers of the R.A.M.C. in time of peace would be allowed to do this work for the medical practitioner, or if they have the time and willingness to undertake it. But I am surgeon to a voluntary aid detachment, and in absence of funds I shall continue to volunteer my services to this company rather than see it disbanded for want of a lecturer or instructor. In order to keep these companies or sections up to strength recruiting has to be done, and for this it is necessary to give a course of lectures every year in first aid and nursing, and if there are no funds I cannot charge a fee. It has been suggested that the county councils would pay these fees if approached. I do not know if they would, but that would lay the classes open to all, whether they joined these voluntary aid companies or not, and in this neighbourhood we generally form these classes only for those who are willing to enlist in the company.

It is an important question, and I should like the views of others. I feel quite sure that the profession does not wish to stand in the way of a patrictic movement.—I am, etc.,

J. A. BENSON.

Green Hammerton, York, May 7th.

MEMORIAL TO MR. ETHERINGTON-SMITH.

SIR,—As a friendly opponent may I be permitted to add my encomiums to the memory of one who, by his tactful and manly bearing, has endeared himself not only to his colleagues, but to his rivals in work and sport?

Some years ago while judging an international boat-race in Cork for the O'Brien Trophy an unfortunate and unforeseen (inter-nation) point arose which demanded prompt decision, and but for the courteous and charming personality of our departed friend serious difficulties might have occurred. His influence will be long felt by the rising generation.

The form the memorial has taken and the sad circumstances of his death should appeal to all.—I am, etc.,

SHEPHERD BOYD,
President, Harrogate Medical Society.

May 12th.

Obituary.

JOHN HERBERT HAWKINS MANLEY, M.A., M.D.CANTAB., M.O.H., WEST BROMWICH.

ON May 4th occurred the death of Dr. Manley at his residence, New Street, West Bromwich, in his 57th year. He had been in failing health for some considerable time, and recently a severe operation became necessary, from which he appeared to be on the way to recovery, when haematemesis occurred, to which he succumbed.

Dr. Manley was the only son of the late Mr. John Manley, who was medical officer of health for West Bromwich for over seventeen years. He was educated at Winchester, Cambridge, and Guy's Hospital, and graduated M.B., B.C. in 1884, and proceeded M.D. in 1902. He took the diploma of L.S.A. in 1882, and that of M.R.C.S.Eng. in the following year. After holding the appointment of resident obstetric physician at Guy's Hospital he returned to West Bromwich about twenty years ago, and joined his father in private practice. He obtained the Diploma of Public Health in 1899, and in the following year succeeded his father as medical officer of health for the borough.

Dr. Manley was a barrister-at-law of the Middle Temple, and at one time thought of practising in this profession, but on his appointment to be school medical officer he devoted all his time to his official duties. He was also medical officer of the Infectious Hospital, examiner in lunacy for the West Bromwich Union, examiner of the St. John Ambulance Association, and a Captain in the Royal Army Medical Corps (T.F.), being a sanitary officer whose services would be available on mobilization.

West Bromwhich owes a great deal to Dr. Manley, for he was indefatigable in his work, and instituted a large number of sanitary reforms. He was held in high esteem by his medical colleagues, not only for his great professional abilities but also for his charming personality. He was a man who had many true friends, for he could always be relied upon. He was a prominent Freemason, and one of the founders of the Lewisham Lodge at West Bromwich. He did excellent work in connexion with the Incorporated Society of Medical Officers of Health, being for some years secretary; he had also held the office of President of the Birmingham and Midland Branch.

He was ex-president of the Birmingham Branch of the British Medical Association, vice-president of the Section of State Medicine at the annual meeting at Leicester in 1905, vice-president of the Medical Defence Union, a Fellow of the Royal Sanitary Institute, honorary associate of the Midland Counties Veterinary Medical Association, and a member of the Medico-Legal Society. He had also been president of the Birmingham Graduates' Club, and a vice-president of the Birmingham Medical Benevolent Society. He was the author of a Legal Appendix to *Reid's Practical Sanitation* (1906), and contributed many articles to the medical and public health journals.

Dr. A. G. BATEMAN (General Secretary of the Medical Defence Union) writes:

Dr. Herbert Manley has for many years been a vice-president and member of the Council of the Medical Defence Union, taking the deepest interest in the work. During the last year he was too ill to attend, but, as soon as his almost miraculous recovery occurred, he at once took up his duties again, and as late as April 21st was present at the last monthly Council meeting. His legal knowledge as a barrister and his practical experience as a medical officer of health afforded to the Council great assistance in dealing with public health matters, and his advice was constantly called for and placed most fully at the services of the executive officers. Dr. Manley was a classical scholar of the first rank, of keen intellectual powers, and a valued friend. The Council will ever retain a high regard for his memory and regret his loss with sincerity.

SIR JOHN WILLIAM TYLER, a well-known Anglo-Indian medical officer, died at his residence in London on May 12th, aged 73. He was educated at the Deveton College in Calcutta, and at the medical college in that city, and in 1861 came to England and took the diplomas of L.S.A. and L.R.C.S. and L.R.C.P.Edin. In 1862 he graduated M.D.St. Andrews, and in 1870 became F.R.C S.Edin. In 1863 he was appointed to the Uncovenanted Medical Service in the North-West Provinces, and joined as civil surgeon of Ebah District. In March, 1866, he was transferred to Manipuri. In April, 1873, he entered the Gaol Department as Superintendent of Meerut Gaol, and in April, 1876, took over charge of the Agra Gaol, which he held for fourteen years. Under Tyler this gaol became known as a great manufacturing gaol, its special line being Indian carpets of the best quality. He was employed on special duty in England at the Colonial and Indian Exhibition of 1886, and for his services on that occasion was given the C.I.E. In December, 1886, he was deputed on special duty in the Dholpur State, and in 1887 came to England again on the staff of the Maharaja of Bhartpur for the jubilee of Her Majesty Queen Victoria. In 1888 he received the honour of knighthood, and in September, 1890, was appointed Inspector-General of Prisons in the North-West Provinces, now the United Provinces of Agra and Oudh. He retired in July, 1896, after a career which may be said to be the most successful of any officer who ever served in the Indian Uncovenanted Medical Service.

LIEUTENANT-COLONEL ALEXANDER WILLIAM MACKENZIE, Bengal Medical Service (retired), died suddenly at Plymouth on May 11th. He was born on October 23rd, 1853, educated at Aberdeen, where he took the degrees of M.B. and C.M. in 1876, and entered the Indian Medical Service as surgeon on March 31st, 1887. He became surgeon-major on March 31st, 1889, and surgeon-lieutenant-colonel on March 31st, 1897. He served in the Afghan war of 1878-80, when he took part in the action at Chihildakhteran, and in the march from Kabul to the relief of Kandahar, and in the battle of Kandahar, gaining the Afghan medal with a clasp and the bronze star given for the march to Kandahar. Subsequently he served in four expeditions on the North-West Frontier of India, the Mahsud Waziri expedition of 1881, the two Miranzai campaigns of 1891, receiving the Frontier medal with a clasp, and in Waziristan in 1894-95, gaining another clasp.

MAJOR CHARLES FREDERICK WEINMANN, Indian Medical Service, died in London on May 4th. He was born on July 2nd, 1871, and was by extraction a Ceylon "burgher." After taking the degrees of M.B., C.M. at Aberdeen in 1896, he entered the Indian Medical Service as lieutenant in 1899. He became captain in 1902, and major in 1911. He served in Waziristan, on the north-west frontier, in 1901-2, receiving the frontier medal with the clasp for that campaign. For the past six years he had been in civil employment in Bengal, and since October 3rd, 1912, on furlough. Major Weinmann was civil surgeon of Midnapur at the time of the sedition trials at that station, a few years ago, and also at the same time was acting as superintendent of Midnapur Central Jail, in which a number of prisoners who were being tried for sedition were confined; this was a very onerous charge for a young officer who had lately taken up civil employment. Subsequently he appeared as a witness in the notorious Midnapur conspiracy case in the Calcutta High Court. He had complained that his life had been threatened by members of the anarchist party in Bengal, owing to his having given evidence in that case on behalf of Government. Such threats to witnesses, police officers, and magistrates in Bengal have been numerous during the

past few years, and in several cases the threats have been carried to the extent of political murders. His mind gave way under the strain. On March 1st last, while staying in a Bloomsbury boarding-house, he was found in bed suffering from eight wounds, inflicted by a surgical lancet. He was then suffering from a delusion that the servants in the house were trying to poison him. He was removed to the Royal Free Hospital, and there recovered from his injuries. Subsequently he greatly improved, both mentally and physically, and seemed to have made a complete recovery. Unfortunately his delusions returned, and on the morning of May 4th he threw himself from a third-story window of the house in which he was staying, and so put an end to his life.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Bastian, lecturer in the University of Geneva, one of the founders of the Société Romande de Gynécologie et Obstétrique, President of the Geneva League against cancer; Dr. Julian Count de Calleja, Dean of the Medical Faculty of the University of Madrid, and President of the Spanish Academy of Medicine; Dr. Ch. H. Ali Cohen, formerly lecturer on hygiene in the faculty of medicine of Groningen; Dr. John H. Droge, chief laryngologist to the German Hospital, Brooklyn, of which he was one of the founders, aged 53; Dr. A. P. Co Korkaunoff, former professor of therapeutics in the University of Tomsk; Dr. T. H. Perrin, lecturer on urology in the medical faculty of Lausanne; Dr. Hugo Schinelka, professor in the veterinary university of Vienna, formerly assistant in Professor Albert's Surgical Clinic; and Dr. Paul Yvon, co-founder with Bourneville of the *Archives de Neurologie* and the *Progrès Medical*, author of a handbook of urine analysis, commentaries on the Pharmaceutical Codex (1908), in the preparation of which he had taken a leading part, and in collaboration with Professor Gilbert of a *Formulaire pratique de therapeutique et de pharmacologie*, a work now in its twenty-fifth edition, aged 65.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.D.—H. T. Ashby.
M.B.—G. V. Bakewell, T. H. G. Shore, H. K. Waller, H. F. Wilson.
B.C.—T. H. G. Shore, H. K. Waller.

UNIVERSITY OF EDINBURGH.

GENERAL COUNCIL.

Decrease in Number of Medical Students.

THE statutory half-yearly meeting of the General Council of the University of Edinburgh was held on May 7th. It was intimated that whilst there was an increase for the year (1911–12) in the total number of matriculated students attending the University there was a decrease in the number of medical students (1,326 as against 1,374 in the previous year).

The Inclusive Fee.

Reference was made to the question of the inclusive fee in medicine in several of the reports presented. Thus the Finance Committee noted with interest that "My Lords of the Treasury are giving directions for the payment of the additional grant of £12,500 for the current financial year, stipulating as a condition of receiving payment of the full amount that an inquiry shall be made as to the difficulties in the way of instituting an inclusive fee in applied science and medicine." Mr. J. B. Clark, Convener of the Business Committee, also referred to the action of the Treasury, which he regarded as an ample vindication of the attitude which the University Court had taken up on the subject, and consistently maintained, and Principal Laurie, Heriot-Watt College, believed that the General Council had made good their point not to allow the Treasury to interfere too much with the freedom and autonomy of the university. An appendix to the report contains the minute of the Conference of Representatives of the General Councils of the Universities of Glasgow and Edinburgh on March 22nd, when the effect of the inclusive fee in medicine upon extramural students was specially considered, and a subcommittee was appointed to prepare a reasoned statement. Meanwhile Principal Laurie moved that the General Council represent to the University Court the desirability of amending the regulations for the payment of inclusive fees in such a way that extramural students might be placed at no disadvantage; and this was agreed to.

Moncrieff Arnott Chair of Clinical Medicine.

The draft ordinance for the foundation of the Moncrieff-Arnott Chair of Clinical Medicine was approved. The chair is intended to perpetuate the memory of the late James Moncrieff Arnott, of Chapel, in the county of Fife, a graduate of the University of Edinburgh, and a medical practitioner of distinction, and also the memory of his daughter, the late Miss Jane Moncrieff Arnott, benefactors of the university. The Professor of Clinical Medicine is to be a Professor in the Faculty of Medicine, and is to be paid as an annual income the interest of £15,000, and if this does not amount to £600 a year the salary is to be made up to that sum out of the General University Fund. Further, on due cause being shown, the University Court shall have power to increase the emoluments. The University Court also shall from time to time, after consultation with the Senatus, define the duties of the Professor; and the patronage of the Professorship and the right of presentation or appointment shall be vested in and exercised by the University Court after consultation with the Managers of the Edinburgh Royal Infirmary for the time being. An important clause is that which provides for the contingency arising should the Professor of Clinical Medicine cease from any cause to have charge of clinical wards which in the opinion of the University Court are well fitted for the efficient teaching of his subject, then the Court shall have power to terminate his tenure of office as Professor of Clinical Medicine, and to determine the amount of pension, if any, which shall be granted to him—that is to say, if the contingency arise before he is entitled to a pension in the ordinary course.

Appointments.

The Business Committee reported that the following appointments had been made: Frederick Gardiner, M.D., an additional Lecturer on Diseases of the Skin. R. Chapman Davie, M.D., B.Sc., Lecturer on Botany in room of R. Stewart MacDougall, D.Sc., resigned. W. G. Sym, M.D., Lecturer on Diseases of the Eye. David G. Hogarth, M.A., Fellow of Magdalen College, Oxford, and Keeper of the Ashmolean Museum, Munro Lecturer on Anthropology and Prehistoric Archaeology for 1914. A. Ninian Bruce, M.D., D.Sc., Lecturer on the Physiology of the Brain and Nervous System. Professor Henri Bergson, Collége de France, Paris, Gifford Lecturer in Natural Theology for 1913-15.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

A COMITIA was held on May 8th, Sir Thomas Barlow, Bart., K.C.V.O., the President, being in the chair.

Admission of Fellows.

The Members who were elected to the Fellowship at the last meeting were admitted Fellows.

Diplomas in Tropical Medicine and Hygiene.

Diplomas in Tropical Medicine and Hygiene were granted in conjunction with the Royal College of Surgeons of England to the following: F. P. Connor, Captain, I.M.S.; C. A. Gill, Captain, I.M.S.; Frances M. Harper.

A report was received from the Censors Board recommending that the following clause in a report of the Committee of Management be adopted. This was agreed to. The clause was as follows: "The attention of the committee has been called to the fact that the short title of the Diploma in Tropical Medicine and Hygiene—namely, 'D.T.M.England'—is not sufficiently descriptive, and that it is desirable to add a reference to hygiene in the title. The committee, therefore, recommend that the short title of the diploma be altered from 'D.T.M.England' to 'D.T.M. and H.England.'"

Alteration in By-laws.

An alteration was made in By-law CXXIV relating to the examination for the Membership. Candidates who have not been approved by the Censors Board can now be readmitted to examination after the lapse of six months, instead of a year as heretofore.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary Council was held on May 8th.

Grant of Diplomas.

Diplomas of Membership were granted to eighty-nine candidates found qualified at the recent examination. Diplomas of the Licence in Dental Surgery were granted to five candidates found qualified. Diplomas in Tropical Medicine were granted conjointly with the Royal College of Physicians to three candidates.

Honorary Fellow.

Surgeon-Major Henry Benjamin Hinton was made an Honorary Fellow. An account, written by our South Australian correspondent, of the life of this retired officer, who attained the centenary of his birth on March 7th, was published in the BRITISH MEDICAL JOURNAL of March 15th, p. 569.

Vacancy on Board of Examiners.

The vacancy on the Board of Examiners occasioned by the retirement of Mr. W. F. Haslam will be filled in June. Mr. Haslam is not eligible for re-election.

Resignation from the Council.

The resignation of Mr. Bruce Clarke from the Council was

accepted with regret by the Council. The vacancy will be filled up at the annual meeting of Fellows in July.

Letter from the Home Office.

Mr. Richardson Cross was nominated to give evidence before the Home Office Committee on Factory Lighting.

CONJOINT BOARD IN ENGLAND.

AT a meeting of Comitia of the Royal College of Physicians on April 24th, and of the Council of the Royal College of Surgeons on May 8th, diplomas of L.R.C.P. and M.R.C.S. were respectively conferred upon the following candidates:

C. B. Alexander, J. Appleyard, J. S. Arkle, R. A. Banbury, M. Barker, H. G. Barrie, H. J. Bates, R. S. De C. Bennett, E. W. Blake, T. D. J. Bowen, B. J. Brewitt, R. C. Briscoe, W. H. Broughton, P. P. Butler, P. N. Button, L. D. Cohen, F. Collar, G. D. Compston, E. R. C. Cooke, H. D. Cowper, W. Dale, A. C. L. D'Arifat, A. L. Davies, H. W. Davies, R. D. Davy, H. P. Dawson, S. A. Day, E. L. Dobson, J. D. Driberg, E. L. Z. Fickling, G. Garland, A. Goodwin, A. O. Gray, J. L. Green, A. Griffith-Williams, J. L. A. Grout, D. M. Hanson, J. S. Higgs, W. H. S. Hodge, *Elsie M. Humpherson, G. B. H. Jones, J. E. T. Jones, W. E. Kingdon, G. Laurence, G. A. Lilly, W. M. Lupton, J. D. Lyle, G. R. D. McGeagh, P. McRitchie, E. M. Mahon, H. Y. Mansfield, S. H. Marcus, G. S. Mather, W. J. Morris, H. H. P. Morton, W. H. Ogilvie, H. F. Overend, J. Owen, R. C. Parry, J. R. Payne, W. A. Pocock, R. C. Poyser, N. P. Pritchard, A. L. H. Rackham, W. A. Rail, C. G. Reinhardt, J. E. Rivera, G. M. Roberts, G. F. Rodrigues, A. B. Rosher, W. Salisbury, E. L. K. Sargent, A. W. M. Sawyer, R. S. Scott, D. N. Seth-Smith, A. K. Sinha, J. G. Skeet, J. S. Souttar, W. C. Spackman, D. B. Spence, E. J. Staddon, A. J. C. Tingey, E. W. Twining, E. H. Udall, A. Viney, I. L. Waddell, G. Whittington, R. F. Wilkinson, H. Wilks.

* Under the Medical Act, 1876.

Public Health AND POOR LAW MEDICAL SERVICES.

TUBERCULOSIS (IRELAND) ORDER.

ARRANGEMENTS have now been made with the Treasury and the Irish Department of Agriculture have issued a Tuberculosis Order on the same lines as that operating in Great Britain. Every person having in his possession or under his charge (1) any cow which is, or appears to be, suffering from tuberculosis of the udder, indurated udder, or other chronic disease of the udder; or (2) any bovine animal which is or appears to be suffering from tuberculosis with emaciation shall, without avoidable delay, give information of the fact to a constable of the police force for the area wherein the animal is, and the constable shall transmit the information (*a*) to the local authority, who, if not the sanitary authority, shall inform that authority; and (*b*) to the department. The milk from such a cow must not be mixed with other milk until the cow has been examined by a veterinary inspector; it must be boiled or otherwise sterilized forthwith, and any utensil in which such milk is placed before being so treated shall be thoroughly cleansed with boiling water before any other milk is placed therein. The animal must be kept isolated as far as practicable from other bovine animals. By this order a veterinary inspector shall be authorized to visit and examine all suspected animals, and if necessary and with the consent of the owner apply the tuberculin test; he may also require the cow to be milked in his presence, and take a separate sample of milk from any particular teat. Authority is also given for the slaughter of all such animals as are reported by the veterinary inspector to be diseased, except in the case of animals valued at over £30, so long as the animal is detained and isolated and the milk (if any) is sterilized. When a veterinary surgeon in his private practice is employed to examine an animal, and is of opinion that the cow is tuberculous, he must notify the case. Authority is also given to make *post-mortem* examinations of all animals slaughtered under this Order, and to require suspected animals to be removed from markets or sale yards, and any cow which is or appears to be suffering from tuberculosis must not be brought to any port for shipment. Provision is also made for the cleansing and disinfection of premises and sheds in which tuberculous cows have been recently kept.

This Order applies to the whole of Ireland, and is to come into operation on June 2nd.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Guildford Rural District.—Based on an estimated population at the middle of 1912 of 18,420, the net birth-rate was 19.4 per 1,000 and the net death-rate 8.9 per 1,000. The infant mortality-rate was equal to 48 per 1,000 births. Although out of the 172 houses inspected under the regulations of the Housing, Town Planning, etc., Act, 1909, 16 were considered to be unfit for human habitation, no steps were taken to close them owing to the reluctance of the district council to make closing orders until all other means had failed to make the houses habitable, for cottages are very scarce in the district. Dr. Pierce, the medical officer of health, describes a method which has been adopted with success for dealing with the drainage of cottages otherwise than by means of cesspits. A small pit or detritus chamber has been constructed at a distance of not less than 20 ft. from the dwelling, and radiating from it are rows of end-to-end agricultural pipes laid within a foot or so of the surface whereby subsoil irrigation is carried out. By-laws with respect to tents, vans, and sheds are in force, and Dr. Pierce considers they have been of considerable service. For the effective control of persons occupying these places he considers further legislation may be necessary. He is not altogether in favour of the formation of recognized encampments, as his experience of two such has shown that the aggregation of large numbers on small areas of ground, especially when in a low-lying locality, leads to a deplorably insanitary condition of the ground, and that nothing short of the provision of a hard dry surface with suitable drainage for surface and waste water, and periodical scavenging will prevent such places from becoming insanitary in course of time. By-laws with respect to slaughter-houses are in force in the district, but they do not apply to farm premises upon which sheep and swine, but not cattle, may from time to time be slaughtered, provided that such sheep or swine are not conveyed to a farm specially for the purpose of slaughter. The Local Government Board was asked whether the by-laws would apply to cottagers who occasionally slaughtered an animal, but would express no opinion on the matter, merely stating that each particular instance must be considered on its merits.

Barry Urban District.—Dr. George Neale states that the net birth-rate during 1912 was 23.9 per 1,000 and the net death-rate 10.4 per 1,000 of the population, which was estimated at 33,767. The infant mortality-rate was equal to 60 per 1,000 births. Although there are in Barry nearly 6,500 houses, only about forty of them were built prior to the year 1885, and these are mostly well-constructed farmhouses on the outskirts of the town. The governing body of the town has always been alive to its responsibilities so that it is not surprising to learn that there are practically no slums. What may be described as the municipal equipment of the town is very complete. The sewage is discharged by two outfalls into the sea below low-water mark, and there has never been any evidence of any of it being returned by the incoming tide. About twelve years ago a destructor was erected at a cost of £9,000; it is capable of destroying 30 tons of refuse daily. The power generated is used for providing electric light for the destructor works and for the adjoining public abattoir and for giving steam to the latter for water-heating purposes. There are separate hospitals for small-pox and for other infectious diseases. The latter institution does not seem to be very much used, for only 1 of the 63 cases of scarlet fever, 2 of the 47 cases of diphtheria, and 6 of the 26 cases of typhoid fever notified during the year were treated in the wards of the hospital. A qualified veterinary inspector is employed by the district council to inspect the dairy cows in the town. In the course of his inspections in 1912 he discovered two cows with tuberculosis of the udder, and his diagnosis was confirmed by bacteriological examination of the milk. The cows were isolated and the owners were requested to destroy them. In one case the request was complied with and general tuberculosis was found to be present. In the other case the owner refused to destroy the animal unless he was compensated, but in a short time it died. Dr. Neale includes in his report a very useful table giving the rateable value and the amount of the district rate since the year 1889, from which it appears that the rateable value has increased from £18,000 to £186,000. The district rate, which was 3s. 6d. in the £ in 1912, has been as low as 1s. 8d., and only in one year has it been as high as 4s. in the £.

LOCAL GOVERNMENT BOARD REPORTS.

East Stow Rural District (New series, No. 75).—Dr. Wilfred Fletcher's report to the Local Government Board on the rural district of East Stow, in East Suffolk, is the result of an inspection of the district made in consequence of doubt having been raised as to the sufficiency of the arrangements for the discharge of the duties of inspector of nuisances. Dr. Fletcher appears to consider those arrangements adequate, and formed the opinion that the district council had for some time displayed little desire to secure improvements in the sanitary circumstances of the district, though he recognized that it was now making real efforts to do so. The housing accommodation is described as fairly good, but there seems to be a deficiency of accommodation for agricultural labourers, whose weekly wage of 12s. is insufficient to enable them to pay an adequate rental for good dwellings. There are no by-laws in force in the district, so that the deterrent effect of stringent regulations is not a determining factor in the failure to erect cottages in East Stow. Of the dairies and cowsheds in the district there is little adverse criticism. Regulations concerning them have been in force since 1907, and are apparently enforced. Dr. Fletcher takes occasion to point out that a district council's duties with respect to cowsheds are not limited to those cowsheds which are in the occupation of cowkeepers and purveyors of milk who are registered, but extend to those occupied by "any person following the trade of cowkeeper and dairyman," and, therefore, to such as carry on the trade of cowkeeper for the manufacture of cheese, butter, or for other purposes. The population of the rural district is over 6,000, and has increased in the past ten years, but no provision has been made for isolating cases of infectious disease, except that for small-pox purposes a small portable building is stored in sections. The district council would be well advised to combine with one or more adjoining districts in making the necessary provision for other infectious diseases.

CONDITIONS OF SUPERANNUATION ALLOWANCE.

A RETIRED Poor Law medical officer, who is in receipt of a superannuation, has been succeeded by his partner. He wishes to know if his superannuation would be forfeited if he were to give an anaesthetic for his partner when operating on a Poor Law patient.

*** We are advised that superannuation would not be forfeited in the circumstances he describes. Under Section 6 of the Superannuation Act of 1896, if he were to accept another Poor Law office the emoluments from which exceeded his superannuation, the latter would be suspended so long as he continued to hold that office. But the superannuation would not be affected by his acting as deputy for his partner, or assisting him in his Poor Law work.

Medical News.

THE Post-Graduate College, West London Hospital, will give a conversazione at the hospital, Hammersmith Road, on Wednesday, May 21st, at 8.30 p.m.

DR. ARGYLL CAMPBELL, assistant to Professor Schäfer, University of Edinburgh, has been appointed Professor of Physiology in the Medical School at Singapore.

THE Bakerian Lecture before the Royal Society will be delivered by Professor Sir J. J. Thomson, O.M., at 4.30 p.m. on Thursday next. The lecture will deal with rays of positive electricity.

THE annual general meeting of the Asylum Workers' Association will be held at 11, Chandos Street, W., on May 28th, when Sir Robert Jardine, K.C.I.E., M.P., President of the Association, will take the chair at 3 p.m.

THE Glasgow University Club, London, will hold its annual spring dinner at the Trocadero Restaurant, Piccadilly Circus, on May 30th, when the Right Hon. A. Birrell, M.P., Lord Rector of the University, will take the chair at 7.30 p.m.

A NOAH'S ark fair and variety show in aid of the London Hospital Quinquennial Appeal Fund is to be held at the Albert Hall on June 11th and 12th, under the patronage of H.M. Queen Alexandra, who has consented to be present on June 11th.

THE annual general meeting of the Medical Defence Union will be held on May 29th at 4 p.m., at the New London Hotel, Exeter, when the usual statutory resolutions will be placed before the members, together with the annual report and balance-sheet.

THE annual conference of the British Hospitals Association will be held at Oxford from June 20th to June 28th. Papers dealing with the Insurance Act as affecting voluntary hospitals, the treatment of tuberculosis, and the upkeep of hospitals will be read and discussed.

THE first of the summer course of lectures at Brompton Hospital for Consumption will be delivered next Wednesday at 4.30 p.m. The lectures are free to all registered medical practitioners and senior students, and will be given by different members of the staff on Wednesday each week.

THE British Fire Prevention Committee's testing station, near Regent's Park, was opened, after the recent extension and alteration, on May 7th. The testing arrangements for the day comprised high-temperature fire tests with fire-resisting glazing and with fire-resisting party-wall doors. There was a large attendance of representatives of the various public authorities concerned in fire protection, such as the Home Office, H.M. Office of Works, the Admiralty, of the Post Office, Woolwich Arsenal, of municipal bodies, and of Colonial and foreign Governments.

AT a meeting of the Medico-Psychological Association of Great Britain and Ireland to be held at the house of the Medical Society of London at 3.15 p.m. on Tuesday, May 27th, Drs. R. G. Rows and David Orr will read a paper, illustrated by lantern slides, on the spread of infection by the ascending lymph stream of nerves (ascending neuritis) from the peripheral inflammatory foci to the central nervous system.

IN the announcement of the approaching twelfth International Congress of Ophthalmology published last week (p. 988) it should have been stated that it will take place in the month of August next year, and not August next. It will be opened in St. Petersburg on August 10th, 1914, under the presidency of Professor Arnaldo Angelucci of Naples, the city in which the last congress was held. The subjects selected by the Congress in Naples for special discussion at St. Petersburg were the etiology of trachoma and the nutrition of the eye. The general secretary in St. Petersburg is Dr. Th. Germann, the Ophthalmic Hospital, Mochowaja 38, St. Petersburg.

A FRENCH philanthropist who wishes to remain anonymous has offered a prize of £200 for the best memoir relating to the etiology, prophylaxis, or treatment of such forms of iritis, irido-cyclitis, or cyclitis as are not dependent on syphilis. Only such papers as have been communicated to one of the ophthalmological societies of France or some other country will be admitted to competition. The jury, three in number, will be chosen from the ophthalmologists of the principal institutions for eye diseases of Paris. Memoirs, which may be written or printed, may be in French, English, or German. They must be sent by August 15th, 1914, to the Bureau des Annales d'oculistique, 26, Boulevard Raspail, Paris.

THE Cremation Society of Geneva, which celebrated the twentieth anniversary of its foundation in November, 1912, has decided to present M. Burkhard Reber, its President, with a gold medal in commemoration of his strenuous labours for the advance of cremation during the last quarter of a century. M. Reber was the first to propose the establishment of a cremation society with its headquarters at Geneva. He met with much opposition from different quarters, and many difficulties had to be overcome. His persistence, however, overcame all obstacles, and cremation has now conquered its rightful place in Geneva. M. Reber has taken an active part in the propaganda in other parts of Switzerland and foreign countries. M. Reber, who is a pharmacist by profession, has a fine collection of antiquities relating to the history of medicine, pharmacy, and the natural sciences.

IT appears from an address recently published by Dr. Louis Stricker that an "Optometry Bill" was passed by the Ohio Legislature but vetoed by the Governor. A large fund had been collected by the opticians in the United States, and Dr. Stricker says that "it was not all used to engage learned counsel," and expresses regret that some medical men refer patients to these unqualified practitioners for refraction, and that some oculists accept commissions from opticians for the patients they send to them to have glasses fitted. It is necessary that the public shall be educated in the difference between the qualified medical men who are ophthalmic experts and the advertising spectacle vendors, but Dr. Stricker went on to say that some doctors who had had no special ophthalmic training posed as experts, and brought the whole profession into disrepute. Sooner or later he hoped that legislation would be introduced compelling all men calling themselves specialists in ophthalmology to pass an examination such as has been inaugurated by the Universities of Oxford, Liverpool, and Colorado.

The Head Master of Eton lectured on Eugenics, Ethics, and Religion before a large audience at the May afternoon meeting of the Eugenics Education Society, which was held at the Grafton Galleries on May 8th. Canon Lyttelton said that the science of eugenics was concerned with racial development, and dealt with the past in a scientific way, hoping to extract from it lessons for the future, and emphasized the sense of the preciousness of human life, which was the direct outcome of Christianity. The eugenist should be welcomed in the religious training of the young, since he could show how vigorously science corroborated the true principles of child training; but the Christian could hardly be expected to welcome biology unless it came as an addendum to something deeper and more personal. The eugenist and the Christian were so near together, however, that there should be no difficulty about co-operation between them. The Christian could not say that his religion was not concerned with the bodily health of the present and future generations; and the Divine example warranted us in believing that we were intended to beautify, refresh, and cheer the lives of others in this world, and not only to prepare them for the next. In so far as we believed the eugenic principle to be true, we should plant it in young minds for its own sake, and not primarily because its outcome would be beneficial to humanity. If disloyalty to a common faith had been the real cause of the social disorders around us, then a return to our faith must be fraught with almost infinite hope. If what he conceived to be possible came to pass, there would be a saving revival of home life and training in England; but in the meantime we had to deal with innumerable young lives which had been in those respects stunted and starved. It could not be wrong to try to apply the principle of foster-parents, and huge though the sum total of failures might be, it must not be doubted that every worker who tried to quicken the lives of young people by inspiring them with the touch of love was doing his utmost to spread a great truth. It might be the truest eugenics to revive in every class of society the meaning of home as a place where the seeds of physical, moral, and

spiritual life were sown. Unless ideas of home were spread and deepened in the next hundred years the outcome must be the decay of the people.

AT a well-attended dinner of the medical profession of Wigan and district held on May 8th, Dr. Monks, J.P., in the chair, a cheque for £50 was presented to Dr. Campbell, who has acted as secretary of the Local Medical Committee since the passing of the Insurance Act, and has expended much time and energy in securing equitable treatment for the medical profession in the area. As the chairman pointed out, the cheque would but barely recompense Dr. Campbell for the out-of-pocket expenses which he has incurred on behalf of his colleagues. Amongst those present were the Chairman and ex-Chairman of the Division (Wigan) of the British Medical Association, the Chairman and Honorary Secretary of the Wigan Medical Society, and Dr. John Campbell, Assistant Lecturer on Anatomy at the University of Liverpool, and brother of the guest of the evening.

THE members of the Dover Division of the British Medical Association entertained Dr. F. B. Hulke at a complimentary dinner on May 8th, when the Chairman, Dr. Charles Wood, presented to him a silver rose bowl, subscribed for by members of the Division as well as other members of the profession in the district, as a recognition of their gratitude to him for the ungrudging manner in which he had given his time and services, on their behalf, as a member of the Kent County Medical Committee since its formation. The toast having been duly honoured, Dr. Hulke thanked the subscribers and said he would always most highly value the gift and the feeling which had prompted it. After referring to the struggle through which the profession had passed during the last two years, a struggle which he believed was still in its infancy and likely to become more strenuous, Dr. Hulke urged on those present the necessity for perfecting their organization and binding themselves together, each individually supporting his neighbours. In the meantime they must remember that, though they were few in numbers, and their votes were not likely to turn any election, and that, for this reason, they were liable to be overlooked by both sides in party politics, still the profession possessed immense influence, if it only took the trouble to use it. The great mass of the people, the insured and their families, and the employers as well as the employed, must be won over.

DR. NEVILLE CROWE, Honorary Secretary of the Worcester Division, was entertained at a complimentary dinner on Friday evening, May 9th, and presented with a purse of gold and a silver salver bearing the inscription, "Presented to H. Neville Crowe by members of the Worcester Division of the British Medical Association in recognition of his services as their Representative. May 9, 1913." Dr. Stretton (Kidderminster), who presided, in making the presentation said that Dr. Crowe, who had carried on the duties of secretary in troublous times with such remarkable success, must have inherited his capacity from his father, who for twenty-six years had been honorary secretary of the Worcestershire and Herefordshire Branch. The improvements effected in the conditions of medical benefit as compared with those laid down in the bill as introduced, and the increased remuneration, were due to the action of the various Divisions and their secretaries throughout the country, and among those officers no one had worked harder than Dr. Crowe. Seventy-seven members of the Division had subscribed in order that Dr. Neville Crowe should have some tangible reminder of the work he had done. Dr. Crowe, in acknowledging the compliment and the gift, said that members of the Association had reason to congratulate themselves upon having been able to convince Mr. Lloyd George that he had underestimated the amount which should be paid to the medical profession for the work it was required to do. Even now, however, although the profession had undertaken to carry out the work at a certain price until January, 1914, the Government, as represented by the Insurance Commissioners, was trying to make certain deductions from the amount agreed to be paid. There were, however, two sides to every contract. Dr. Crowe also said that certain Insurance Committees seemed to consider that they had no responsibility to pay the doctor for those persons who had not yet exercised their right of choice, but the profession was responsible for the treatment of any person who presented the insurance card, and would therefore expect to be paid for every insured person from January 15th, 1913. It was essential that every doctor should keep the records required by the Government, for there might be an attempt to cut down the contract price in the future.

Letters, Notes, and Answers.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, Westrand, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, Westrand, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

OMEGA asks for suggestions as to the etiology and treatment of pain in the back experienced by a patient on rising and throughout the day. Its locality can be covered by placing the hands over and on either side of the spine about the level of the waist belt. The kidneys are not movable, and all organs, as well as the spine, are apparently healthy. The patient, a domestic servant aged 35, presents no evidence of hysteria or of rheumatism of the joints, and though spare and of poor muscular development seems otherwise healthy.

LETTERS, NOTES, ETC.

A MEMBER of the British Medical Association, who died not long ago, left behind him a complete series of *all the* issues of the BRITISH MEDICAL JOURNAL from 1874 to 1910. They are well bound in half-yearly volumes, and the administrator of the deceased member's estate is willing to present them to any medical man or institution desirous to possess them. His name and address can be obtained on application at the office of the Association.

THE WATERS TESTIMONIAL FUND.

THE Honorary Secretary of the Bootle Ward of the Liverpool Division of the British Medical Association (Dr. J. Walker) forwards the following letter of thanks for publication:

On behalf of Mrs. Waters and the trustees of this fund, we beg to acknowledge with grateful thanks the liberal response of the members of the Liverpool Division to the appeal which we circulated last month. Subscriptions amounting to £63 6s. have been received since the issue of the circular, which, added to the amount previously subscribed, makes a total of £243 7s. 6d. It is proposed to use the fund for the education of the children of the late Dr. Waters, both girls, aged 11 and 6 years respectively.

E. J. CLAXTON.
J. DUNN.
J. WALKER.

MEDICAL EVIDENCE.

LAWYERS are in the habit of scoffing at medical evidence, unless it happens to be on their side. It cannot be denied that doctors sometimes cut a sorry figure under the ordeal of cross-examination by a keen-witted counsel. Sometimes the tables are turned, as when a much-badgered physician said, in reply to a suggestion that the mistakes of doctors are often buried underground, that the mistakes of lawyers were sometimes hung above it. We have come across another instance of a doctor scoring off counsel in the *South African Medical Record*. A medical witness in a Western State of America was giving evidence in a case of murder. One of the jurymen asked him whether the accused "had anything wrong with his head." "Yes," said the doctor, "he was the subject of old-standing and severe alopecia praesenilis." Counsel did not press the examination on this point further, and although the case for the prosecution was conclusive the accused was acquitted by the jury, who were under the impression that the man was not responsible for his actions.

CORRECTION.

IN the report of a case of abdominal aneurysm by Dr. J. Rupert Collins and Mr. C. Braine-Hartnell, published last week, it was stated, under the heading "Post-mortem Examination" (p. 988), that "The lower end of the wire was tucked away inside the aneurysm immediately outside the end of the liver." For "end of the liver" read "endothelium."

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Eight lines and under	0	4	0
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NOTE.—It is against the rules of the Post Office to receive *postes restante* letters addressed either in initials or numbers.